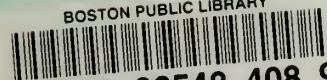


BOSTON PUBLIC LIBRARY



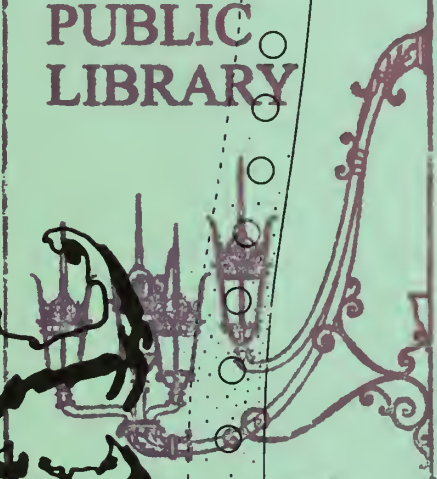
3 9999 06548 408 9

*table*

# Hispanic Births in Massachusetts Volume 2: City Data Book



BOSTON  
PUBLIC  
LIBRARY



Bureau of Health Statistics, Research and Evaluation  
Massachusetts Department of Public Health



April 1989

Research  
Library

GOV DOCS

HB

935

.M4L44

1989

Prepared by:

Ruth I. Lederman, M.P.H.

Bruce B. Cohen, Ph.D.

Daniel J. Friedman, Ph.D.

Technical data and clerical support:

Robert Danley, Joan Gancarski, Gregory Hanna, Clare Mahan, Alice Mroszczyk,  
Mary Mroszczyk, Vania Senat, and Gary Young

Special thanks to Massachusetts Department of Public Health colleagues:

Maria Aguiar, Marlene Anderka, Saul Franklin, and Sarah Johnson

To obtain additional copies of this report, contact:  
Bureau of Health Statistics, Research and Evaluation  
Massachusetts Department of Public Health  
150 Tremont Street 5th floor  
Boston, Massachusetts 02111

(617) 727-DATA

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF HUMAN SERVICES  
DEPARTMENT OF PUBLIC HEALTH

MICHAEL S. DUKAKIS, GOVERNOR  
PHILIP S. JOHNSTON, SECRETARY, EXECUTIVE OFFICE OF HUMAN SERVICES  
DEBORAH PROTHROW-STITH, M.D., COMMISSIONER, DEPARTMENT OF PUBLIC HEALTH  
HOWARD SPIVAK, M.D., DEPUTY COMMISSIONER, DEPARTMENT OF PUBLIC HEALTH

# **HISPANIC BIRTHS IN MASSACHUSETTS**

## **VOLUME 2: CITY DATA BOOK**

BUREAU OF HEALTH STATISTICS, RESEARCH AND EVALUATION  
DANIEL J. FRIEDMAN, Ph.D., ASSISTANT COMMISSIONER  
RESEARCH AND EPIDEMIOLOGY  
BRUCE B. COHEN, Ph.D., DIRECTOR

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH  
150 TREMONT STREET  
BOSTON, MASSACHUSETTS 02111

APRIL 1989

## Table of Contents

List of Figures and Tables

Technical Notes

City Tables

Boston	2
Cambridge	10
Chelsea	18
Holyoke	26
Lawrence	34
Lowell	42
Lynn	50
New Bedford	58
Springfield	66
Worcester	74

Appendices

Glossary	82
Massachusetts Maternity Hospitals	85
Birth Certificate	86

## List of Figures and Tables

### Boston

#### Figures

- |                                  |   |
|----------------------------------|---|
| 1. Hispanic Population in Boston | 2 |
|----------------------------------|---|

#### Tables

- |   |   |
|---|---|
| 1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity  | 2 |
| 2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births  | 3 |
| 3. Age Distribution of Mothers by Race and Ethnicity  | 3 |
| 4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity                                   | 4 |
| 5. Maternal Education by Race and Ethnicity   | 4 |
| 6. Place of Birth for Hispanic Mothers  | 5 |
| 7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth                           | 5 |
| 8. Method of Delivery by Race and Ethnicity   | 6 |
| 9. Adequacy of Prenatal Care Utilization by Race and Ethnicity  | 6 |
| 10. Source of Prenatal Care Payment by Race and Ethnicity   | 7 |
| 11. Site of Prenatal Care by Race and Ethnicity   | 7 |
| 12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care | 8 |

### Cambridge

#### Figures

- |                                     |    |
|-------------------------------------|----|
| 1. Hispanic Population in Cambridge | 10 |
|-------------------------------------|----|

#### Tables

- |   |    |
|---|----|
| 1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity  | 10 |
| 2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births  | 11 |
| 3. Age Distribution of Mothers by Race and Ethnicity  | 11 |
| 4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity                                   | 12 |
| 5. Maternal Education by Race and Ethnicity   | 12 |
| 6. Place of Birth for Hispanic Mothers  | 13 |
| 7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth                           | 13 |
| 8. Method of Delivery by Race and Ethnicity   | 14 |
| 9. Adequacy of Prenatal Care Utilization by Race and Ethnicity  | 14 |
| 10. Source of Prenatal Care Payment by Race and Ethnicity   | 15 |
| 11. Site of Prenatal Care by Race and Ethnicity   | 15 |
| 12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care | 16 |



## Chelsea

### Figures

1. Hispanic Population in Chelsea	18
-----------------------------------	----

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity	18
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births	19
3. Age Distribution of Mothers by Race and Ethnicity	19
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity	20
5. Maternal Education by Race and Ethnicity	20
6. Place of Birth for Hispanic Mothers	21
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth	21
8. Method of Delivery by Race and Ethnicity	22
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity	22
10. Source of Prenatal Care Payment by Race and Ethnicity	23
11. Site of Prenatal Care by Race and Ethnicity	23
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care	24

## Holyoke

### Figures

1. Hispanic Population in Holyoke	26
-----------------------------------	----

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity	26
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births	27
3. Age Distribution of Mothers by Race and Ethnicity	27
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity	28
5. Maternal Education by Race and Ethnicity	28
6. Place of Birth for Hispanic Mothers	29
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth	29
8. Method of Delivery by Race and Ethnicity	30
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity	30
10. Source of Prenatal Care Payment by Race and Ethnicity	31
11. Site of Prenatal Care by Race and Ethnicity	31
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care	32

## Lawrence

### Figures

1. Hispanic Population in Lawrence 34

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity 34
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births 35
3. Age Distribution of Mothers by Race and Ethnicity 35
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity 36
5. Maternal Education by Race and Ethnicity 36
6. Place of Birth for Hispanic Mothers 37
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth 37
8. Method of Delivery by Race and Ethnicity 38
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity 38
10. Source of Prenatal Care Payment by Race and Ethnicity 39
11. Site of Prenatal Care by Race and Ethnicity 39
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care 40

## Lowell

### Figures

1. Hispanic Population in Lowell 42

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity 42
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births 43
3. Age Distribution of Mothers by Race and Ethnicity 43
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity 44
5. Maternal Education by Race and Ethnicity 44
6. Place of Birth for Hispanic Mothers 45
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth 45
8. Method of Delivery by Race and Ethnicity 46
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity 46
10. Source of Prenatal Care Payment by Race and Ethnicity 47
11. Site of Prenatal Care by Race and Ethnicity 47
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care 48

## Lynn

### Figures

1. Hispanic Population in Lynn 50

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity 50
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births 51
3. Age Distribution of Mothers by Race and Ethnicity 51
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity 52
5. Maternal Education by Race and Ethnicity 52
6. Place of Birth for Hispanic Mothers 53
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth 53
8. Method of Delivery by Race and Ethnicity 54
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity 54
10. Source of Prenatal Care Payment by Race and Ethnicity 55
11. Site of Prenatal Care by Race and Ethnicity 55
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care 56

## New Bedford

### Figures

1. Hispanic Population in New Bedford 58

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity 58
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births 59
3. Age Distribution of Mothers by Race and Ethnicity 59
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity 60
5. Maternal Education by Race and Ethnicity 60
6. Place of Birth for Hispanic Mothers 61
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth 61
8. Method of Delivery by Race and Ethnicity 62
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity 62
10. Source of Prenatal Care Payment by Race and Ethnicity 63
11. Site of Prenatal Care by Race and Ethnicity 63
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care 64



## Springfield

### Figures

1. Hispanic Population in Springfield 66

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity 66
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births 67
3. Age Distribution of Mothers by Race and Ethnicity 67
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity 68
5. Maternal Education by Race and Ethnicity 68
6. Place of Birth for Hispanic Mothers 69
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth 69
8. Method of Delivery by Race and Ethnicity 70
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity 70
10. Source of Prenatal Care Payment by Race and Ethnicity 71
11. Site of Prenatal Care by Race and Ethnicity 71
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care 72

## Worcester

### Figures

1. Hispanic Population in Worcester 74

### Tables

1. Summary of Maternal and Perinatal Characteristics by Race and Ethnicity 74
2. Distribution of Births by Race and Ethnicity for Maternity Hospitals with the Largest Number of Hispanic Births 75
3. Age Distribution of Mothers by Race and Ethnicity 75
4. Maternal Risk Characteristics and Adverse Birth Outcomes by Race and Ethnicity 76
5. Maternal Education by Race and Ethnicity 76
6. Place of Birth for Hispanic Mothers 77
7. Risk Characteristics and Adverse Birth Outcomes for Hispanic Mothers by Place of Birth 77
8. Method of Delivery by Race and Ethnicity 78
9. Adequacy of Prenatal Care Utilization by Race and Ethnicity 78
10. Source of Prenatal Care Payment by Race and Ethnicity 79
11. Site of Prenatal Care by Race and Ethnicity 79
12. Proportion of Mothers with Adequate Prenatal Care Utilization for Selected Sources of Payment and Sites of Care 80

## Technical Notes

Volume 2 contains detailed city-specific data for the ten Massachusetts communities with the most Hispanic births. These tables follow the format used in Volume 1, Chapter 3, so that city-specific information can be compared with statewide data. Data for particular Hispanic subgroups are omitted for cities where the number of births are too small to be informative.

The unit of analysis for this volume is births. If a woman had more than one birth during the study period each birth is counted separately.

The percentages reported on all tables are based on the number of known responses for a particular variable, unless the number of unknown is specifically reported. Also, the number of births may vary from table to table depending on the number of unknown responses.

When a race/ethnic category for a variable contains less than five births, the number and the corresponding percentage are not reported because of confidentiality and statistical concerns about the lack of stability of estimates based on small numbers of observations.

The Hispanic group "Other" is a combination of mothers who did not report any of the designated Hispanic subgroups. "Other Hispanic" may include other subgroups which had less than five births in a city.

The variable "Source of Prenatal Care Payment" is divided into three categories in this report. The "Public" category refers to prenatal care payment by Medicaid, Medicare, Healthy Start, Workers' Compensation or other government programs. The "Private" category refers to prenatal care payment by Blue Cross, commercial insurers, or a Health Maintenance Organization. The third category is for prenatal care payment by self pay or free care.



TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

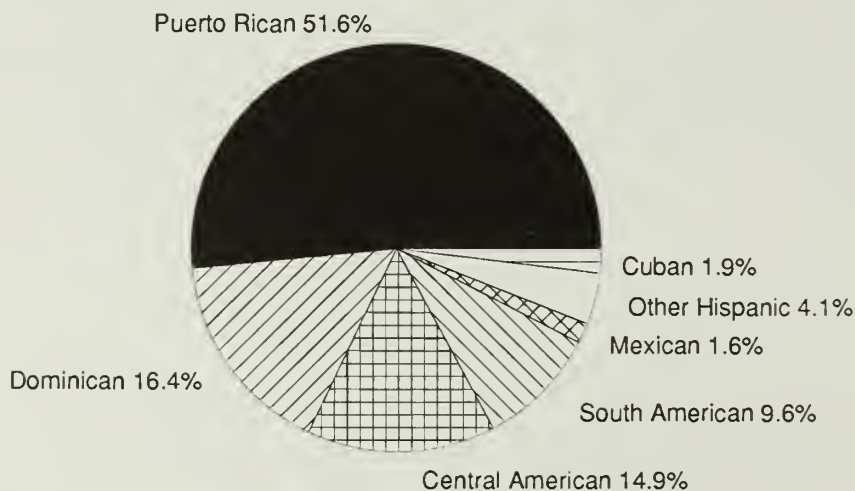
	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public <sup>1</sup>
	Number	%	%	%	%	%	%	%	%
City Total	13 934	10.9	12.3	41.3	5.3	34.1	72.0	32.7	42.6
Hispanic	1 979	8.7	18.6	52.1	11.5	81.0	71.7	52.0	64.8
Puerto Rican	1 022	9.4	25.3	63.6	8.8	72.9	71.4	54.3	74.4
Dominican	324	7.1	9.9	42.3	11.0	95.1	77.3	61.2	67.6
Central American	294	8.2	10.5	42.7	22.5	94.9	65.1	45.0	46.2
South American	189	10.6	5.3	28.0	9.4	97.9	68.5	44.1	47.9
Mexican	31	9.7	*	29.0	35.5	67.7	61.5	19.3	35.5
Cuban	37	5.4	16.2	37.8	0.0	78.4	82.4	48.5	48.5
Other Hispanic	82	6.1	32.1	52.4	9.2	42.5	81.2	45.7	59.8
White Non-Hispanic	5 661	7.3	6.5	20.8	1.0	10.0	82.0	17.1	23.5
Black Non-Hispanic	5 104	13.8	16.9	62.7	4.4	33.2	60.1	43.5	54.5
Other	882	7.6	6.7	21.8	25.3	88.2	74.3	26.1	45.6

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

## Distribution of Hispanic Births in Boston



Massachusetts: July 1986 - December 1987

TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Boston Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Dominican		Central American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Brigham & Women's	5 292	2 040	38.5	1 805	34.1	204	3.9	1 065	20.1	570	53.5	244	22.9	90	8.5	161	15.1
Boston City	2 309	281	12.2	1 578	68.3	47	2.0	401	17.4	223	55.6	34	8.5	85	21.2	59	14.7
St. Margaret's	2 271	1 225	53.9	685	30.2	106	4.7	220	9.7	138	62.7	26	11.8	27	12.3	29	13.2
Beth Israel	2 251	868	38.6	832	37.0	344	15.3	134	6.0	51	38.1	14	10.4	30	22.4	39	29.1
St. Elizabeth's	658	315	47.9	103	15.7	138	21.0	102	15.5	24	23.5	*	*	43	42.2	33	32.4
Cambridge	106	59	55.7	18	17.0	9	8.5	20	18.9	*	*	0	0	12	60.0	5	25.0
Malden	203	180	88.7	*	*	5	2.5	7	3.5	0	0	*	*	0	0	5	71.4
Newton Wellesley	355	326	91.8	14	3.9	8	2.2	6	1.7	*	*	0	0	0	0	*	*
Other Hospitals	489	367	75.1	65	13.3	21	4.3	24	4.9	10	41.7	*	*	7	29.2	5	20.8

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	45	0.3	102	0.7	244	1.8	333	2.4	438	3.1	550	4.0	3550	25.5	4334	31.1	2977	21.4	1343	9.6
Hispanic	12	0.6	23	1.2	60	3.0	68	3.4	101	5.1	103	5.2	688	34.8	511	25.9	273	13.8	137	6.9
Puerto Rican	7	0.7	14	1.4	49	4.8	50	4.9	70	6.9	68	6.7	378	37.1	234	22.9	98	9.6	52	5.1
Dominican	*	*	*	*	*	*	5	1.5	8	2.5	13	4.0	116	35.8	93	28.7	64	19.8	19	5.9
Central American	*	*	*	*	*	*	*	*	8	2.7	12	4.1	93	31.6	93	31.6	47	16.0	30	10.2
South American	0	0	*	*	0	0	*	*	*	*	*	*	58	30.7	58	30.7	39	20.6	24	12.7
Mexican	0	0	0	0	*	*	*	*	*	*	*	*	10	32.3	*	*	10	32.3	*	*
Cuban	0	0	0	0	*	*	*	*	*	*	*	*	11	29.7	12	32.4	6	16.2	*	*
Other Hispanic	*	*	*	*	5	6.2	6	7.4	7	8.6	5	6.2	22	27.2	17	21.0	9	11.1	7	8.6
White Non-Hispanic	*	*	13	0.2	29	0.5	60	1.1	113	2.0	150	2.7	1072	19.0	1987	35.2	1551	27.4	674	11.9
Black Non-Hispanic	27	0.5	62	1.2	139	2.7	185	3.6	191	3.7	257	5.0	1569	30.8	1403	27.5	873	17.1	393	7.7
Other	*	*	*	*	8	0.9	11	1.2	13	1.5	25	2.8	150	17.0	337	38.3	226	25.6	109	12.4

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.



TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Dominican	Central American	Other Hispanic
<b>RISK CHARACTERISTICS</b>									
Unmarried	% <sup>1</sup>	20.8	62.7	21.8	52.1	63.6	42.3	42.7	35.1
	#	1 176	3 196	192	1 026	645	137	125	119
Smoking	%	16.7	8.2	2.4	4.2	5.7	2.5	*	4.1
	#	944	419	21	83	58	8	*	14
Parity > 3	%	6.9	12.4	10.8	11.2	12.6	8.6	12.9	8.0
	#	393	635	95	222	129	28	38	27
Late or No Prenatal Care <sup>2</sup>	%	14.1	33.7	21.9	23.9	24.6	20.4	27.6	22.1
	#	798	1 718	193	473	251	66	81	75
Conditions of Labor <sup>3</sup>	%	13.0	12.2	7.9	11.4	11.7	11.4	10.5	10.9
	#	734	622	70	225	120	37	31	37
Not Breastfeeding	%	48.4	51.0	64.7	37.9	46.4	25.7	33.2	27.6
	#	2 693	2 572	562	737	467	82	96	92
<b>ADVERSE OUTCOMES</b>									
Gestation < 37 Weeks	%	6.0	10.8	5.2	7.5	8.3	4.9	8.2	7.3
	#	337	550	46	149	85	16	24	24
Low Birthweight	%	7.3	13.9	7.6	8.7	9.4	7.1	8.2	8.8
	#	411	707	67	173	96	23	24	30
Apgar < 6 <sup>4</sup>	%	2.3	3.6	2.5	2.8	3.0	2.2	2.4	3.2
	#	133	182	22	56	31	7	7	11

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	5.3	22.8	71.4
Hispanic	11.5	35.3	53.2
Puerto Rican	8.8	45.7	45.5
Dominican	11.0	27.2	61.8
Central American	22.5	20.4	57.0
South American	9.4	19.9	70.7
Mexican	35.5	19.5	45.2
Cuban	0.0	25.0	75.0
Other Hispanic	9.2	34.2	56.6
White Non-Hispanic	1.0	13.7	85.3
Black Non-Hispanic	4.4	27.2	68.4
Other	25.3	27.1	47.5

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Boston Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		Central American		South American		Mexican		Cuban		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%
Non-USA Mainland Born	1 600	100	745	46.6	308	19.2	278	17.4	185	11.6	21	1.3	29	1.8	34	2.1
USA Mainland Born	376	100	277	73.7	16	4.3	15	4.0	*	*	10	2.7	8	2.1	46	12.2

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Boston Residents: July 1986 - December 1987

		Puerto Rican		Dominican		Central American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	18.3	44.0	7.8	50.0	9.0	40.0	7.1	38.2
	#	136	122	24	8	25	6	19	26
Unmarried	%	60.4	72.4	40.3	81.3	41.2	66.7	28.3	60.3
	#	446	199	124	13	114	10	76	41
< 8 years Education	%	10.0	5.5	11.6	0	23.5	*	12.4	*
	#	73	15	34	0	63	*	32	*
Smoking	%	4.6	8.7	2.3	*	*	*	3.7	*
	#	34	24	7	*	*	*	10	*
Parity > 3	%	15.3	5.4	8.8	*	13.7	*	7.1	11.8
	#	114	15	27	*	38	*	19	8
Late or No Prenatal Care <sup>3</sup>	%	22.4	30.3	19.5	37.5	28.8	*	24.9	11.8
	#	167	84	60	6	80	*	67	8
Conditions of Labor <sup>4</sup>	%	11.7	11.9	11.7	*	10.8	*	11.5	8.8
	#	87	33	36	*	30	*	31	6
Not Breastfeeding	%	44.4	52.0	25.3	33.3	32.1	53.3	24.1	40.9
	#	326	141	77	5	88	8	64	27
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	8.2	8.7	4.9	*	7.9	*	7.8	*
	#	61	24	15	*	22	*	21	*
Low Birthweight	%	9.3	9.7	6.8	*	7.2	*	9.3	*
	#	69	27	21	*	20	*	25	*
Apgar < 6 <sup>5</sup>	%	3.4	2.2	2.0	*	2.2	*	2.6	*
	#	25	6	6	*	6	*	7	*

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.

TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	12 000	67.3	16.2	7.8	7.2	1.3	0.3
Hispanic	1 638	65.8	16.3	8.0	8.3	1.3	0.3
Puerto Rican	833	65.6	15.7	8.8	8.2	1.4	*
Dominican	235	58.7	18.3	10.2	11.5	*	*
Central American	271	71.2	16.2	5.2	6.6	*	*
South American	166	68.1	16.3	7.2	6.0	*	*
Mexican	27	66.7	*	*	*	*	*
Cuban	34	52.9	29.4	*	*	*	*
Other Hispanic	72	72.2	12.5	8.3	6.9	*	*
White Non-Hispanic	5 009	63.3	17.1	8.7	9.4	1.2	0.3
Black Non-Hispanic	4 465	70.6	15.9	7.0	5.0	1.4	0.2
Other	809	76.4	12.7	5.4	4.3	0.9	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	66.5	18.9	7.0	7.6
Hispanic	67.9	20.3	6.6	5.3
Puerto Rican	67.8	20.0	7.2	5.0
Dominican	74.7	16.4	5.6	3.4
Central American	60.2	26.5	5.8	7.5
South American	64.6	23.3	6.3	5.8
Mexican	51.6	22.6	9.7	16.1
Cuban	75.7	13.5	2.7	8.1
Other Hispanic	79.3	12.2	6.1	2.4
White Non-Hispanic	77.6	13.1	3.9	5.4
Black Non-Hispanic	55.3	25.7	11.0	8.0
Other	68.9	17.7	6.1	7.3

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.

TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	13 494	51.6	30.5	9.8	2.3	4.1	1.6
Hispanic	1 945	27.3	50.3	10.8	3.8	6.8	1.1
Puerto Rican	1 002	20.5	66.8	4.8	2.8	4.1	1.1
Dominican	321	20.6	54.2	5.0	8.4	11.2	*
Central American	288	43.8	18.7	25.0	2.4	9.4	*
South American	188	39.4	17.8	27.7	2.7	9.6	3.2
Mexican	31	48.4	16.1	19.4	*	16.1	0
Cuban	33	45.5	30.3	*	*	*	0
Other Hispanic	82	36.6	40.2	14.6	*	*	0
White Non-Hispanic	5 554	71.7	15.9	5.9	1.7	3.3	1.4
Black Non-Hispanic	5 002	39.5	39.1	13.0	2.4	4.0	2.0
Other	859	48.9	29.8	14.0	1.9	4.0	1.5

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Boston Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	13 541	31.8	52.7	11.2	23.1	1.2
Hispanic	1 941	13.6	52.0	7.9	25.3	1.2
Puerto Rican	1 004	10.3	54.3	7.2	27.1	1.2
Dominican	317	10.1	61.2	7.9	20.2	*
Central American	287	15.3	45.0	8.7	30.0	*
South American	188	23.4	44.2	8.0	21.8	2.7
Mexican	31	41.9	19.4	0	38.7	0
Cuban	33	27.3	48.5	*	*	0
Other Hispanic	81	22.2	45.7	14.8	16.0	*
White Non-Hispanic	5 585	54.6	17.1	11.9	15.5	0.9
Black Non-Hispanic	5 009	15.1	43.5	12.2	27.9	1.5
Other	863	23.6	26.1	9.3	39.8	1.3

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.



TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Boston Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	3066	57.7	5658	85.1	322	62.0	3601	87.1	2610	63.1	1546	55.0
Hispanic	817	68.5	421	82.4	82	64.6	214	84.3	708	73.1	257	56.9
Puerto Rican	486	68.8	171	84.7	25	62.5	86	86.0	382	72.3	149	59.4
Dominican	159	76.8	53	81.5	26	72.2	23	71.9	156	82.5	36	62.1
Central American	70	56.5	91	77.1	13	52.0	37	86.0	79	66.4	36	45.0
South American	51	60.7	56	78.9	12	70.6	33	78.6	50	65.8	22	56.4
Mexican	6	60.0	8	72.7	*	*	10	90.9	*	*	*	*
Cuban	11	73.3	14	100.0	*	*	8	100.0	12	80.0	*	*
Other Hispanic	34	72.3	28	93.3	*	*	17	94.4	26	72.2	9	75.0
White Non-Hispanic	743	61.8	3416	89.4	133	75.6	2618	89.1	638	71.3	474	61.0
Black Non-Hispanic	1250	50.0	1434	76.3	82	45.3	573	79.0	1102	54.6	583	46.7
Other	221	60.5	347	87.4	22	73.3	172	89.1	130	61.0	218	69.6

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.





TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public <sup>1</sup>
			%	%	%	%	%	%	%
City Total	1 656	9.2	5.1	20.3	5.1	41.7	83.0	20.2	20.5
Hispanic	167	7.8	11.4	46.1	14.5	83.2	74.2	31.1	50.3
Puerto Rican	62	*	18.0	62.9	*	62.9	66.0	38.7	58.1
Dominican	17	*	0	41.2	*	100.0	93.3	47.1	64.7
Central American	42	14.3	*	52.4	40.5	97.6	73.5	31.0	62.5
South American	21	*	*	23.8	*	100.0	64.7	*	28.6
Mexican	12	0	*	*	*	66.7	90.0	*	*
Other Hispanic	13	0	*	*	*	100.0	88.9	*	*
White Non-Hispanic	1 027	7.2	3.7	13.2	3.2	20.7	87.8	12.9	12.0
Black Non-Hispanic	280	13.9	7.9	39.3	6.7	65.2	67.0	42.2	40.0
Other	148	6.8	*	4.7	5.0	95.3	89.1	16.6	10.4

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

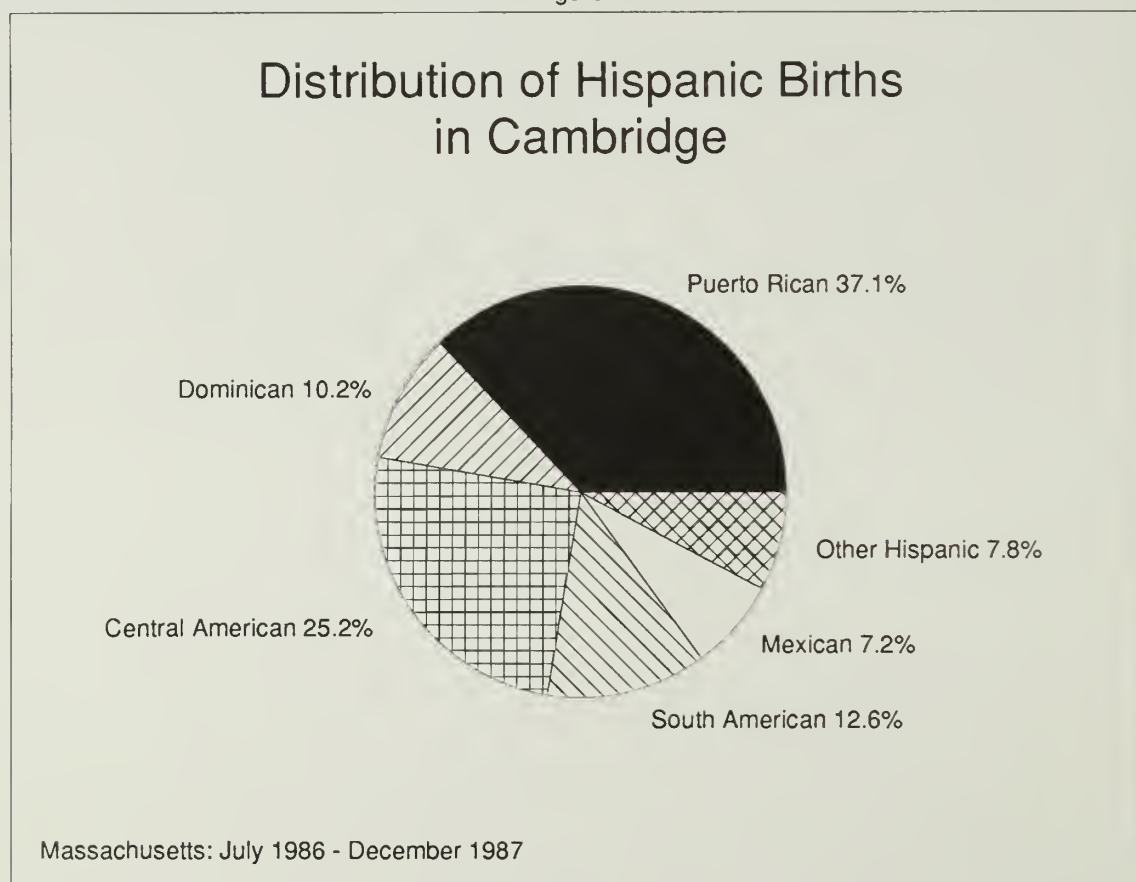


TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Cambridge Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Central American		South American		Other Hispanic	
	#	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Cambridge City	275	121	44.0	76	27.6	7	2.6	70	25.5	24	34.3	28	40.0	*	*	14	20.0
Brigham & Women's	459	282	61.4	46	10.0	82	17.9	38	8.3	11	29.0	*	*	9	23.6	15	39.5
Beth Israel	395	255	64.6	67	17.0	36	9.1	26	6.6	11	42.3	*	*	7	26.9	*	*
Mount Auburn	254	171	67.3	51	20.1	11	4.3	18	7.1	11	61.1	*	*	*	*	5	27.7
St. Elizabeth's	48	32	66.7	6	12.5	*	*	7	14.6	*	*	*	*	0	0	*	*
Other Hospitals	225	166	73.8	34	15.1	9	4.0	8	3.6	*	*	*	*	0	0	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	*	*	6	0.4	7	0.4	10	0.6	24	1.5	34	2.1	268	16.2	529	31.2	493	29.8	280	16.9
Hispanic	*	*	*	*	*	*	*	*	6	3.6	5	3.0	54	32.5	55	33.1	27	16.3	11	6.6
Puerto Rican	*	*	*	*	0	0	*	*	*	*	*	*	22	36.1	18	29.5	8	13.1	*	*
Dominican	0	0	0	0	0	0	0	0	0	0	0	0	6	35.3	8	47.1	*	*	*	*
Central American	*	*	0	0	*	*	0	0	*	*	*	*	18	42.9	15	35.7	*	*	*	*
South American	0	0	*	*	0	0	0	0	0	0	0	0	*	*	7	33.3	8	38.1	*	*
Mexican	0	0	0	0	0	0	0	0	*	*	0	0	*	*	*	*	*	*	*	*
Other Hispanic	0	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*	*	*
White Non-Hispanic	0	0	*	*	*	*	*	*	13	1.3	16	1.6	142	13.8	295	28.8	323	31.5	228	22.2
Black Non-Hispanic	*	*	0	0	*	*	*	*	5	1.8	10	3.6	55	19.6	97	34.6	84	30.0	22	7.9
Other	0	0	0	0	*	*	0	0	0	0	*	*	10	6.8	73	49.3	48	32.4	13	8.8

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Central American	South American	Other Hispanic
RISK CHARACTERISTICS									
Unmarried	% <sup>1</sup>	13.2	39.3	4.7	46.1	62.9	52.4	23.8	26.2
	#	135	110	7	77	39	22	5	11
Smoking	%	9.5	8.6	0	6.0	8.1	*	*	*
	#	98	24	0	10	5	*	*	*
Parity > 3	%	3.6	13.6	*	9.6	8.1	21.4	*	*
	#	37	38	*	16	5	9	*	*
Late or No Prenatal Care <sup>2</sup>	%	8.9	26.8	9.5	19.2	24.2	19.0	28.6	*
	#	91	75	14	32	15	8	6	*
Conditions of Labor <sup>3</sup>	%	12.8	12.9	4.7	9.0	*	19.0	*	*
	#	131	36	7	15	*	8	*	*
Not Breastfeeding	%	29.3	34.9	15.6	27.0	45.9	19.5	*	17.5
	#	294	96	23	44	28	8	*	7
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	3.5	6.4	4.1	4.8	8.1	*	0	0
	#	36	18	6	8	5	*	0	0
Low Birthweight	%	7.2	13.9	6.8	7.8	*	14.3	*	*
	#	74	39	10	13	*	6	*	*
Apgar < 6 <sup>4</sup>	%	2.9	3.6	*	3.6	*	*	0	*
	#	30	10	*	6	*	*	0	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	5.1	11.2	83.7
Hispanic	14.5	25.9	59.6
Puerto Rican	*	31.1	63.9
Dominican	*	*	70.6
Central American	40.5	35.8	23.8
South American	*	23.8	76.2
Mexican	*	0	91.7
Other Hispanic	*	*	84.6
White Non-Hispanic	3.2	7.5	89.3
Black Non-Hispanic	6.7	16.9	76.4
Other	5.0	9.4	85.6

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Cambridge Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		Central American		South American		Mexican		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%
Non-USA Mainland Born	139	100.0	39	28.1	17	12.2	41	29.5	21	15.1	8	5.8	13	9.4
USA Mainland Born	28	100.0	23	82.1	0	0	*	*	0	0	*	*	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Cambridge Residents: July 1986 - December 1987

		Puerto Rican		Central American		South American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	*	34.9	*	0	*	0	*	0
	#	*	8	*	0	*	0	*	0
Unmarried	%	59.0	69.6	51.2	*	23.8	0	28.9	0
	#	23	16	21	*	5	0	11	0
< 8 years Education	%	*	0	41.5	0	0	0	*	0
	#	*	0	17	0	0	0	*	0
Smoking	%	0	21.7	0	*	*	0	*	*
	#	0	5	0	*	*	0	*	*
Parity > 3	%	*	*	22.0	0	*	0	*	0
	#	*	*	9	0	*	0	*	0
Late or No Prenatal Care <sup>3</sup>	%	23.1	26.1	19.5	0	28.6	0	*	0
	#	9	6	8	0	6	0	*	0
Conditions of Labor <sup>4</sup>	%	*	*	17.1	*	*	0	*	0
	#	*	*	7	*	*	0	*	0
Not Breastfeeding	%	39.5	56.5	17.5	*	*	0	16.7	*
	#	15	13	7	*	*	0	6	*
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	12.8	0	*	0	0	0	0	0
	#	5	0	*	0	0	0	0	0
Low Birthweight	%	*	0	14.6	0	*	0	*	0
	#	*	0	6	0	*	0	*	0
Apgar < 6 <sup>5</sup>	%	*	0	*	0	0	0	*	0
	#	*	0	*	0	0	0	*	0

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.



TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	1 493	67.7	18.0	5.7	6.0	2.2	0.4
Hispanic	155	74.8	11.0	4.5	6.5	*	*
Puerto Rican	56	82.1	8.9	*	*	0	0
Dominican	14	71.4	*	0	*	0	*
Central American	41	70.7	14.6	*	0	*	0
South American	20	65.0	*	*	*	*	0
Mexican	11	63.4	*	0	0	0	0
Other Hispanic	13	84.6	*	0	0	0	0
White Non-Hispanic	931	65.7	19.8	20.0	5.8	2.6	*
Black Non-Hispanic	266	71.4	15.0	7.5	3.8	1.9	*
Other	120	66.7	19.2	*	10.8	*	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	72.7	11.2	3.7	12.4
Hispanic	58.7	14.4	6.0	21.0
Puerto Rican	50.0	17.4	8.1	24.2
Dominican	82.4	*	0	*
Central American	59.5	16.7	*	19.1
South American	52.4	*	*	*
Mexican	75.0	0	*	*
Other Hispanic	61.5	*	0	*
White Non-Hispanic	79.1	8.7	2.3	9.9
Black Non-Hispanic	56.4	20.0	7.9	15.7
Other	83.1	7.4	*	6.8

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.

TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	1 602	72.1	11.6	7.4	4.9	5.0	2.0
Hispanic	165	43.6	27.9	19.4	3.0	*	3.6
Puerto Rican	62	35.5	50.0	*	*	*	*
Dominican	17	35.3	47.1	*	*	0	0
Central American	40	27.5	*	50.0	*	*	*
South American	21	71.4	*	*	0	0	0
Mexican	12	66.7	0	*	0	0	0
Other Hispanic	13	76.9	0	0	0	0	0
White Non-Hispanic	1 006	81.1	7.4	3.9	7.4	4.9	2.0
Black Non-Hispanic	270	49.3	23.0	14.1	3.0	6.7	4.1
Other	144	82.6	*	6.9	*	6.3	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Cambridge Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	1 610	52.4	20.2	14.0	11.6	1.9
Hispanic	167	27.0	31.1	9.0	31.1	*
Puerto Rican	62	24.2	38.7	9.7	24.2	*
Dominican	17	*	47.1	*	*	0
Central American	42	11.9	31.0	0	54.8	*
South American	21	28.6	*	*	33.3	0
Mexican	12	50.0	*	*	*	0
Other Hispanic	13	69.2	*	*	*	0
White Non-Hispanic	1 013	62.9	12.9	16.6	5.5	2.1
Black Non-Hispanic	268	27.2	42.2	8.6	20.5	*
Other	145	55.9	16.6	10.3	15.9	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Cambridge Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	156	63.9	951	88.7	49	73.1	707	89.6	191	69.7	49	65.9
Hispanic	34	60.7	57	86.4	*	*	38	88.4	30	71.4	18	54.5
Puerto Rican	11	50.0	16	76.2	*	*	11	78.6	10	55.5	*	*
Dominican	9	90.0	5	100.0	0	0	*	*	7	87.5	*	*
Central American	11	61.1	11	100.0	*	*	5	100.0	11	91.7	9	56.3
South American	*	*	10	76.9	0	0	6	100.0	*	*	*	*
Mexican	*	*	8	100.0	0	0	5	83.3	*	*	0	0
Other Hispanic	*	*	7	87.5	0	0	8	88.9	*	0	0	0
White Non-Hispanic	67	73.6	687	90.6	31	77.5	540	90.9	83	76.1	33	78.6
Black Non-Hispanic	44	53.0	95	79.8	9	56.3	53	77.9	60	63.2	20	50.0
Other	10	76.9	103	90.4	7	87.5	72	93.5	16	69.6	18	90.0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.



TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

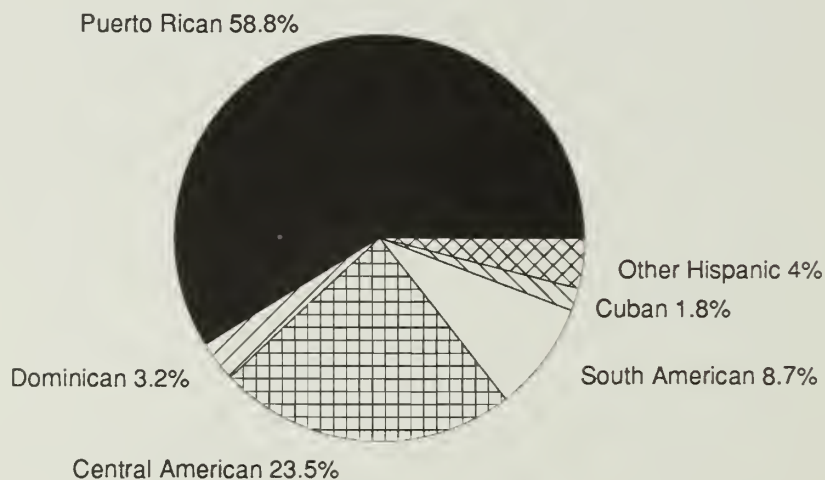
	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public <sup>1</sup>
	Number	%	%	%	%	%	%	%	%
City Total	758	9.1	14.0	40.4	14.7	44.2	67.0	21.7	55.1
Hispanic	277	7.2	22.7	55.2	16.5	79.1	63.9	28.7	76.1
Puerto Rican	163	9.2	26.4	58.3	5.2	69.3	68.6	34.4	79.4
Dominican	9	0	0	55.6	*	100.0	*	*	87.5
Central American	65	7.7	23.1	53.9	38.5	100.0	63.1	19.1	76.6
South American	24	0	*	50.0	29.2	100.0	52.2	25.0	66.7
Cuban	5	0	*	*	0	*	*	0	*
Other Hispanic	11	0	*	71.4	*	*	45.5	*	45.5
White Non-Hispanic	352	8.8	9.1	28.1	1.4	6.0	73.4	15.1	33.3
Black Non-Hispanic	30	33.3	16.7	60.0	*	30.0	69.0	43.3	66.7
Other	83	6.0	7.2	28.9	70.5	96.4	50.0	18.3	73.4

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

## Distribution of Hispanic Births in Chelsea



Massachusetts: July 1986 - December 1987



TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Chelsea Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Central American		South American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
St. Elizabeth's	224	48	21.4	13	43.3	21	25.3	142	63.4	82	57.8	33	23.2	18	12.7	9	6.3
Brigham & Women's	103	57	55.3	*	*	*	*	37	35.9	29	78.4	*	*	*	*	5	13.5
Beth Israel	102	49	48.0	5	4.9	19	18.6	28	27.4	14	50.0	9	32.1	*	*	*	*
Malden	158	116	73.4	*	*	*	*	27	9.7	22	81.5	*	*	*	*	*	*
Boston City	37	6	16.2	*	*	*	*	25	67.6	6	24.0	15	60.0	*	*	*	*
Cambridge City	45	6	13.3	0	0	32	71.1	7	15.6	*	*	*	*	0	0	*	*
St. Margaret's	17	9	52.9	*	*	0	0	6	35.3	6	100	0	0	0	0	0	0
Other Hospitals	72	61	84.5	*	*	*	*	5	6.9	*	*	*	*	*	*	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	*	*	8	1.0	15	2.0	21	2.8	23	3.0	38	5.0	246	32.4	208	27.4	141	18.6	57	7.5
Hispanic	0	0	*	*	11	4.0	11	4.0	14	5.0	24	8.7	106	38.3	64	23.1	30	10.8	14	5.1
Puerto Rican	0	0	*	*	9	5.5	9	5.5	10	6.1	13	8.0	63	38.6	39	23.9	10	6.1	8	4.9
Dominican	0	0	0	0	0	0	0	0	0	0	0	0	5	55.6	*	*	*	*	0	0
Central American	0	0	0	0	*	*	*	*	*	*	10	15.4	23	35.4	15	23.1	12	18.5	0	0
South American	0	0	*	*	0	0	0	0	0	0	*	*	6	25.0	7	29.2	*	*	5	20.8
Cuban	0	0	0	0	*	*	0	0	0	0	*	*	*	*	*	*	0	0	*	*
Other Hispanic	0	0	0	0	0	0	*	*	*	*	0	0	7	63.6	0	0	*	*	0	0
White Non-Hispanic	0	0	*	*	*	*	8	23.0	7	2.0	9	2.6	102	29.0	106	30.1	88	25.0	24	6.8
Black Non-Hispanic	0	0	*	*	0	0	0	0	*	*	*	*	6	20.0	10	33.3	7	23.3	*	*
Other	*	*	0	0	0	0	*	*	*	*	*	*	27	32.5	22	26.5	12	14.5	16	19.3

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Central American	South American	Other Hispanic
RISK CHARACTERISTICS									
Unmarried	% <sup>1</sup>	28.1	60.0	28.9	55.2	58.3	53.9	50.0	44.0
	#	99	18	24	153	95	35	12	11
Smoking	%	34.1	40.0	*	15.2	22.1	*	*	*
	#	120	12	*	42	36	*	*	*
Parity > 3	%	8.8	*	24.1	11.2	12.3	7.7	*	*
	#	31	*	20	31	20	5	*	*
Late or No Prenatal Care <sup>2</sup>	%	21.3	20.0	39.8	29.2	24.5	30.8	41.7	44.0
	#	75	6	33	81	40	20	10	11
Conditions of Labor <sup>3</sup>	%	17.9	16.7	6.0	11.2	12.3	7.7	20.8	*
	#	63	5	5	31	20	5	5	*
Not Breastfeeding	%	65.6	70.0	77.8	52.8	60.1	44.6	26.1	52.2
	#	227	21	63	142	95	29	6	12
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	6.0	20.0	*	6.5	6.7	9.2	*	0
	#	21	6	*	18	11	6	*	0
Low Birthweight	%	8.8	33.3	6.0	7.2	9.2	7.7	0	0
	#	31	10	5	20	15	5	0	0
Apgar < 6 <sup>4</sup>	%	2.6	*	9.6	2.2	*	*	*	*
	#	9	*	8	6	*	*	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	14.7	28.8	56.5
Hispanic	16.5	43.6	39.9
Puerto Rican	5.2	51.3	43.5
Dominican	*	*	55.6
Central American	38.5	33.8	27.7
South American	29.2	25.0	45.8
Cuban	0	*	*
Other Hispanic	*	*	*
White Non-Hispanic	1.4	21.6	77.0
Black Non-Hispanic	*	26.7	66.7
Other	70.5	10.3	19.2

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Chelsea Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		Central American		South American		Cuban		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%
Non-USA Mainland Born	219	100.0	113	51.6	9	4.11	65	29.7	24	11.0	*	*	*	*
USA Mainland Born	58	100.0	50	86.2	0	0	0	0	0	0	*	*	7	12.1

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Chelsea Residents: July 1986 - December 1987

		Puerto Rican		Central American		South American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
<b>RISK CHARACTERISTICS</b>									
< 20 years	% <sup>2</sup>	23.0	34.0	23.1	0	*	0	*	*
	#	26	17	15	0	*	0	*	*
Unmarried	%	56.6	62.0	53.9	0	50.0	0	52.9	*
	#	64	31	35	0	12	0	7	*
< 8 years Education	%	5.7	*	38.5	0	29.2	0	*	0
	#	6	*	25	0	7	0	*	0
Smoking	%	18.6	30.0	*	0	*	0	*	*
	#	21	15	*	0	*	0	*	*
Parity > 3	%	13.3	10.0	7.7	0	*	0	*	*
	#	15	5	5	0	*	0	*	*
Late or No Prenatal Care <sup>3</sup>	%	24.8	24.0	30.8	0	41.7	0	41.2	*
	#	28	12	20	0	10	0	7	*
Conditions of Labor <sup>4</sup>	%	11.5	14.0	7.7	0	20.8	0	*	0
	#	13	7	5	0	5	0	*	0
Not Breastfeeding	%	59.3	62.0	44.6	0	26.1	0	52.9	*
	#	64	31	29	0	6	0	9	*
<b>ADVERSE OUTCOMES</b>									
Gestation < 37 Weeks	%	7.1	*	9.2	0	*	0	0	0
	#	8	*	6	0	*	0	0	0
Low Birthweight	%	7.1	14.0	7.7	0	0	0	0	0
	#	8	7	5	0	0	0	0	0
Apgar < 6 <sup>5</sup>	%	*	*	*	0	*	0	*	0
	#	*	*	*	0	*	0	*	0

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.

TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	718	71.0	13.8	8.1	5.3	1.5	*
Hispanic	263	76.4	11.8	6.8	*	0	0
Puerto Rican	150	77.8	11.3	10.7	4.0	*	*
Dominican	9	77.0	*	0	*	0	0
Central American	65	80.0	16.9	0	*	*	0
South American	24	75.0	*	*	0	*	0
Cuban	5	100.0	0	0	0	0	0
Other Hispanic	10	100.0	0	0	0	0	0
White Non-Hispanic	328	63.7	16.2	10.1	7.9	1.8	*
Black Non-Hispanic	30	70.0	16.7	*	*	0	0
Other	82	85.4	8.5	*	*	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	63.3	25.1	6.1	5.5
Hispanic	60.7	29.2	5.0	5.1
Puerto Rican	64.4	24.5	4.9	6.1
Dominican	*	*	*	*
Central American	63.1	32.3	*	0
South American	50.0	41.7	*	*
Cuban	*	*	*	0
Other Hispanic	45.5	54.5	0	0
White Non-Hispanic	71.3	20.4	5.4	2.8
Black Non-Hispanic	66.7	23.3	*	*
Other	41.0	31.3	9.6	18.1

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.



TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	740	40.7	43.4	10.1	1.6	1.4	2.8
Hispanic	272	19.5	56.6	18.4	*	*	3.3
Puerto Rican	160	16.2	71.3	6.9	*	*	3.1
Dominican	8	0	87.5	0	0	0	*
Central American	64	18.7	31.2	43.8	*	*	*
South American	24	33.3	29.2	37.5	0	0	0
Cuban	5	*	*	*	0	0	*
Other Hispanic	11	54.5	*	0	0	0	0
White Non-Hispanic	348	62.4	27.0	5.2	*	1.7	2.6
Black Non-Hispanic	30	33.3	43.3	16.7	*	0	0
Other	79	24.0	67.1	*	*	*	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Chelsea Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	743	36.1	21.7	4.4	35.7	2.8
Hispanic	272	10.7	28.7	3.7	54.8	2.2
Puerto Rican	160	11.3	34.4	3.8	48.1	2.5
Dominican	9	*	*	0	77.8	0
Central American	63	11.1	19.1	*	68.3	0
South American	24	*	25.0	*	62.5	0
Cuban	5	0	0	0	*	*
Other Hispanic	11	0	*	*	*	0
White Non-Hispanic	350	62.9	15.1	6.3	14.3	1.4
Black Non-Hispanic	30	20.0	43.3	0	33.3	*
Other	82	11.0	18.3	*	67.1	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.



TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Chelsea Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	235	61.4	226	77.9	*	50.0	202	77.1	97	64.2	142	57.7
Hispanic	125	63.8	37	71.2	*	*	20	69.0	48	66.7	87	60.8
Puerto Rican	81	68.6	19	73.1	*	*	12	66.7	36	73.5	50	66.7
Dominican	*	*	0	0	0	0	0	0	0	0	*	*
Central American	30	61.2	10	83.3	0	0	6	85.7	8	66.7	24	55.8
South American	8	50.0	*	*	0	0	*	*	*	*	7	50.0
Cuban	*	*	0	0	0	0	0	0	0	0	*	*
Other Hispanic	*	*	*	*	0	0	*	*	*	*	*	*
White Non-Hispanic	70	61.4	170	81.0	*	*	167	78.0	35	66.0	27	56.3
Black Non-Hispanic	11	57.9	9	90.0	0	0	6	100.0	7	58.3	6	60.0
Other	24	51.5	9	56.3	0	0	6	66.7	6	50.0	21	47.7

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.



TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public
	Number	%	%	%	%	%	%	%	%
City Total	1 339	6.8	21.3	50.9	6.2	36.8	61.7	55.4	63.0
Hispanic	653	9.5	32.7	71.7	11.2	68.9	50.9	84.5	91.1
Puerto Rican	632	9.6	32.7	72.4	11.4	69.5	51.5	85.7	92.0
South American	6	0	*	0	0	100.0	*	*	*
Other Hispanic	15	0	40.0	73.3	*	33.3	*	53.3	73.3
White Non-Hispanic	625	3.8	10.1	27.8	0.8	4.5	73.8	25.4	33.0
Black Non-Hispanic	40	*	17.5	77.5	*	10.0	48.7	55.0	67.5
Other	16	0	*	45.7	*	56.3	62.5	50.0	75.0

\* Percents based on fewer than 5 are not calculated.

' Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

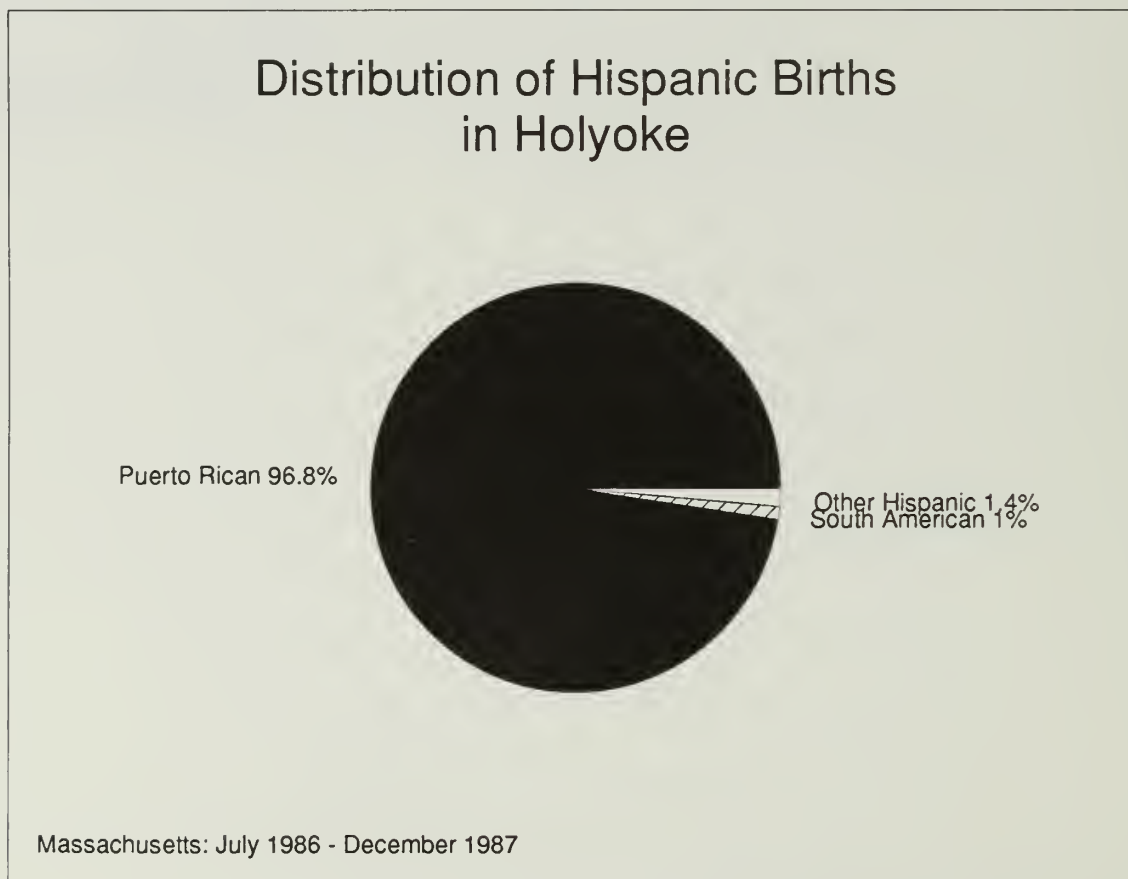


TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Holyoke Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics					
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		South American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Providence	759	321	42.3	23	3.0	9	1.2	405	53.4	396	97.8	*	*	7	1.7
Bay State Medical	526	259	49.2	13	2.5	6	1.1	244	46.4	233	95.5	*	*	7	2.9
Other Hospitals	54	45	83.3	*	*	*	*	*	*	*	*	0	0	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	*	*	18	1.3	43	3.2	74	5.5	61	4.6	85	6.4	448	33.5	370	27.7	183	13.7	50	3.7
Hispanic	*	*	13	2.0	32	4.9	56	8.6	46	7.1	62	9.5	258	39.6	116	17.8	47	7.2	17	2.6
Puerto Rican	*	*	12	1.9	32	5.1	55	8.7	44	7.0	59	9.4	248	39.4	113	17.9	46	7.3	17	2.7
South American	0	0	0	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	0	0
Other Hispanic	0	0	*	*	0	0	*	*	*	*	*	*	7	46.7	*	*	0	0	0	0
White Non-Hispanic	0	0	*	*	10	1.6	16	2.6	14	2.2	19	3.0	170	27.2	232	37.2	130	20.8	29	4.6
Black Non-Hispanic	0	0	*	*	0	0	*	*	*	*	*	*	14	35.0	12	30.0	*	*	*	*
Other	0	0	0	0	*	*	*	*	0	0	0	0	*	*	8	50.0	*	*	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	South American	Other Hispanic
<b>RISK CHARACTERISTICS</b>							
Unmarried % <sup>1</sup>	27.8	77.5	45.7	71.7	72.4	0	73.3
#	174	31	7	467	456	0	11
Smoking %	33.6	40.0	37.5	24.3	24.7	0	40.0
#	210	16	6	159	153	0	6
Parity > 3 %	9.3	22.5	*	20.2	20.7	0	*
#	58	9	*	132	131	0	*
Late or No Prenatal Care <sup>2</sup> %	22.2	40.0	*	38.7	38.1	*	73.3
#	139	16	*	253	241	*	11
Conditions of Labor <sup>3</sup> %	14.4	*	*	15.9	16.0	*	*
#	90	*	*	104	101	*	*
Not Breastfeeding %	52.2	72.5	50.0	69.1	70.2	0	53.3
#	326	29	8	448	440	0	8
<b>ADVERSE OUTCOMES</b>							
Gestation < 37 Weeks %	5.6	12.5	0	11.6	12.0	0	0
#	35	5	0	76	76	0	0
Low Birthweight %	3.8	*	0	9.5	9.6	0	*
#	24	*	0	62	61	0	*
Apgar < 6 <sup>4</sup> %	1.4	*	0	2.6	2.7	0	0
#	9	*	0	17	17	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	6.2	41.5	52.3
Hispanic	11.2	60.6	28.2
Puerto Rican	11.4	60.7	27.9
South American	0	*	*
Other Hispanic	*	53.3	33.3
White Non-Hispanic	0.8	22.3	76.9
Black Non-Hispanic	*	32.5	65.0
Other	*	33.3	40.0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.



TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Holyoke Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		South American		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%
Non-USA Mainland Born	450	100.0	439	97.6	6	1.3	5	1.1
USA Mainland Born	203	100.0	193	95.1	0	0	10	4.9

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Holyoke Residents: July 1986 - December 1987

		Puerto Rican		South American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB
RISK CHARACTERISTICS							
< 20 years	% <sup>2</sup>	27.8	43.8	*	0	0	50.0
	#	122	84	*	0	0	5
Unmarried	%	70.3	77.1	0	0	*	80.0
	#	308	148	0	0	*	8
< 8 years Education	%	13.0	7.8	0	0	0	0
	#	57	15	0	0	0	0
Smoking	%	21.9	29.5	0	0	*	*
	#	96	57	0	0	*	*
Parity > 3	%	25.1	10.9	0	0	*	0
	#	110	21	0	0	*	0
Late or No Prenatal Care <sup>3</sup>	%	36.9	40.9	*	0	*	90.0
	#	162	79	*	0	*	9
Conditions of Labor <sup>4</sup>	%	17.1	13.5	*	0	0	*
	#	75	26	*	0	0	*
Not Breastfeeding	%	68.7	73.4	0	0	*	70.0
	#	299	141	0	0	*	7
ADVERSE OUTCOMES							
Gestation < 37 Weeks	%	13.4	8.8	0	0	0	0
	#	59	17	0	0	0	0
Low Birthweight	%	10.2	8.3	0	0	0	0
	#	45	16	0	0	0	0
Apgar < 6 <sup>5</sup>	%	97.3	97.4	100.0	0	100.0	100.0
	#	427	188	6	0	5	10

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.

TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	1 333	66.9	9.9	9.9	12.5	0.6	*
Hispanic	651	67.6	9.4	11.5	10.7	*	*
Puerto Rican	630	67.3	9.5	11.7	10.6	*	*
South American	6	83.3	0	0	*	0	0
Other Hispanic	15	73.3	*	*	*	0	0
White Non-Hispanic	622	66.1	10.5	8.8	13.8	*	*
Black Non-Hispanic	40	70.0	*	*	15.0	0	0
Other	16	56.2	*	0	31.2	0	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	60.4	28.7	8.7	2.1
Hispanic	49.3	36.3	11.3	3.1
Puerto Rican	50.0	35.8	11.2	3.0
South American	*	*	0	0
Other Hispanic	*	60.0	*	*
White Non-Hispanic	73.1	20.6	*	1.0
Black Non-Hispanic	47.5	30.0	20.0	*
Other	62.5	31.2	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.

TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	1 331	34.4	58.7	3.3	0.9	1.2	1.4
Hispanic	650	8.3	89.2	1.4	*	*	*
Puerto Rican	629	7.3	90.5	1.1	*	*	*
South American	6	*	*	*	0	0	0
Other Hispanic	15	*	66.7	*	0	0	0
White Non-Hispanic	624	62.7	26.4	5.1	1.4	2.1	2.2
Black Non-Hispanic	40	25.0	62.5	*	0	*	*
Other	16	*	68.7	*	0	0	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Holyoke Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	1 333	30.4	55.4	11.5	2.1	0.6
Hispanic	651	8.1	84.5	4.3	2.9	*
Puerto Rican	630	7.9	85.7	3.6	2.5	*
South American	6	*	*	*	0	0
Other Hispanic	15	*	53.3	*	*	0
White Non-Hispanic	625	54.2	25.4	18.4	1.3	*
Black Non-Hispanic	40	17.5	55.0	20.0	*	*
Other	16	37.5	50.0	*	0	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Holyoke Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	410	50.2	373	82.2	10	62.5	314	78.1	360	50.1	11	40.7
Hispanic	278	48.4	40	75.5	*	*	27	52.9	265	49.5	7	38.9
Puerto Rican	276	49.1	36	80.0	*	*	26	54.2	263	50.1	7	43.8
South American	*	*	*	*	0	0	*	*	*	*	0	0
Other Hispanic	0	0	*	*	0	0	0	0	0	0	0	0
White Non-Hispanic	114	56.2	322	83.0	9	69.2	279	82.5	82	52.9	*	*
Black Non-Hispanic	10	38.5	9	90.0	0	0	5	71.4	8	38.1	0	0
Other	8	66.7	*	*	*	*	*	*	5	62.5	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.





TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public <sup>1</sup>
			%	%	%	%	%	%	%
City Total	2 299	7.1	16.7	40.7	3.6	45.4	53.8	29.1	49.1
Hispanic	988	7.9	20.9	54.7	6.2	81.3	37.6	41.6	71.4
Puerto Rican	522	9.8	28.8	68.6	6.4	73.4	36.0	43.3	79.5
Dominican	392	6.1	12.1	39.6	5.9	92.1	37.7	39.5	64.6
Central American	14	0	*	21.4	*	92.9	69.2	*	42.9
South American	23	0	*	26.1	*	82.6	54.6	30.4	47.8
Cuban	11	*	0	18.2	0	90.0	55.6	*	*
Other Hispanic	26	*	26.9	61.5	0	65.4	26.9	65.4	69.2
White Non-Hispanic	1 072	5.6	12.3	27.7	1.2	7.5	68.8	18.8	27.5
Black Non-Hispanic	33	9.1	21.2	63.6	*	30.3	51.6	39.4	57.6
Other	80	5.0	12.5	23.8	11.1	91.2	42.3	24.1	39.2

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

## Distribution of Hispanic Births in Lawrence

Puerto Rican 52.8%



Other Hispanic 3.7%  
South American 2.3%  
Central American 1.4%

Dominican 39.7%

Massachusetts: July 1986 - December 1987

TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Lawrence Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Dominican		South American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Lawrence General	1 415	550	38.9	14	1.0	55	3.9	678	47.9	353	52.1	276	40.7	17	2.5	32	4.7
Bon Secours <sup>3</sup>	601	322	53.6	11	1.8	16	2.7	252	41.9	135	53.6	98	38.9	5	2.0	14	5.6
Brigham & Women's	49	24	49.0	*	*	*	*	22	44.9	10	45.5	9	40.9	0	0	*	*
Lowell General	38	26	68.4	*	*	*	*	8	21.1	*	*	*	*	*	*	0	0
St Margaret's	14	6	42.9	*	*	*	*	6	42.9	5	83.3	*	*	0	0	0	0
Beth Israel	13	7	53.9	*	*	*	*	*	*	*	*	*	*	0	0	0	0
Other Hospitals	169	137	81.1	5	3.0	5	3.0	18	10.6	12	66.7	*	*	0	0	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

<sup>3</sup> October 1988, name changed to Holy Family Hospital and Medical Center.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	12	0.5	21	0.9	56	2.4	64	2.8	100	4.4	129	5.6	816	35.6	674	29.4	320	14.0	100	4.4
Hispanic	8	0.8	18	1.8	38	3.9	38	3.9	49	5.0	55	5.6	362	36.8	233	23.7	134	13.6	49	5.0
Puerto Rican	*	*	14	2.7	27	5.2	27	5.2	39	7.5	39	7.5	206	39.5	113	21.7	40	7.7	12	2.3
Dominican	*	*	*	*	9	2.3	9	2.3	7	1.8	14	3.6	129	33.2	103	26.5	80	20.6	30	7.7
Central American	0	0	0	0	0	0	*	*	0	0	0	0	*	*	*	*	*	*	*	*
South American	0	0	0	0	*	*	0	0	0	0	0	0	10	43.5	5	21.7	*	*	*	*
Cuban	0	0	0	0	0	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*
Other Hispanic	0	0	0	0	*	*	*	*	*	*	*	*	10	38.5	6	23.1	*	*	*	*
White Non-Hispanic	*	*	*	*	12	1.1	19	1.8	42	3.9	56	5.2	385	36.0	361	33.7	153	14.3	40	3.7
Black Non-Hispanic	0	0	0	0	*	*	*	*	0	0	5	15.1	13	39.4	11	33.3	*	*	0	0
Other	0	0	0	0	*	*	*	*	*	*	5	6.2	17	21.3	28	35.0	18	22.5	7	8.8

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Dominican	South American	Other Hispanic
RISK CHARACTERISTICS									
Unmarried	% <sup>1</sup>	27.7	63.6	23.8	54.7	68.6	39.6	26.1	41.2
	#	296	21	19	540	358	155	6	21
Smoking	%	29.2	*	6.2	8.2	12.8	2.5	0	*
	#	313	*	5	81	67	10	0	*
Parity > 3	%	6.4	*	11.3	10.7	11.1	8.9	*	19.6
	#	69	*	9	106	58	35	*	10
Late or No Prenatal Care <sup>2</sup>	%	15.4	30.3	10.0	29.7	34.1	25.3	*	23.5
	#	165	10	8	293	178	99	*	12
Conditions of Labor <sup>3</sup>	%	10.1	*	6.2	10.9	9.2	13.0	*	9.8
	#	108	*	5	108	48	51	*	5
Not Breastfeeding	%	62.6	56.7	58.4	47.0	52.2	41.2	34.8	46.9
	#	635	17	45	413	235	147	8	23
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	10.3	18.2	7.5	12.8	14.0	12.8	*	*
	#	110	6	6	127	73	50	*	*
Low Birthweight	%	5.6	*	*	7.9	9.8	6.1	0	*
	#	60	*	*	78	51	24	0	*
Apgar < 6 <sup>4</sup>	%	2.0	0	0	2.7	3.3	1.8	*	*
	#	21	0	0	27	17	7	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.<sup>4</sup> 5-minute Apgar Score.TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	3.6	32.4	64.1
Hispanic	6.2	45.6	48.2
Puerto Rican	6.4	53.8	39.7
Dominican	5.9	35.0	59.1
Central American	*	*	45.5
South American	*	30.0	65.0
Cuban	0	*	80.0
Other Hispanic	0	42.9	57.1
White Non-Hispanic	1.2	22.7	76.1
Black Non-Hispanic	*	23.3	73.3
Other	11.1	26.7	62.2

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Lawrence Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		Central American		South American		Cuban		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%
Non-USA Mainland Born	803	100.0	383	47.7	361	45.0	13	1.6	19	2.4	10	1.3	17	2.1
USA Mainland Born	185	100.0	139	75.1	31	16.8	*	*	*	*	*	*	9	4.9

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Lawrence Residents: July 1986 - December 1987

	Puerto Rican		Dominican		South American		Other Hispanics		
	NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB	
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	21.9	47.8	8.1	58.1	0	*	*	*
	#	84	66	29	18	0	*	*	*
Unmarried	%	66.8	73.4	36.9	71.0	26.3	*	45.0	*
	#	256	102	133	22	5	*	18	*
< 8 years Education	%	5.0	9.9	5.9	*	0	*	*	0
	#	14	11	13	*	0	*	*	0
Smoking	%	10.4	19.4	2.2	*	0	0	*	*
	#	40	27	8	*	0	0	*	*
Parity > 3	%	11.2	10.8	8.9	*	*	*	22.5	*
	#	43	15	32	*	*	*	9	*
Late or No Prenatal Care <sup>3</sup>	%	31.8	40.3	24.9	29.0	*	*	17.5	45.5
	#	122	56	90	9	*	*	7	5
Conditions of Labor <sup>4</sup>	%	9.9	7.2	13.8	*	*	0	*	*
	#	38	10	50	*	*	0	*	*
Not Breastfeeding	%	48.0	63.6	41.2	41.4	31.6	*	42.1	63.6
	#	158	77	135	12	6	*	16	7
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	13.8	14.4	11.9	22.6	*	0	*	*
	#	53	20	43	7	*	0	*	*
Low Birthweight	%	9.7	10.1	6.4	*	0	0	*	0
	#	37	14	23	*	0	0	*	0
Apgar < 6 <sup>5</sup>	%	3.4	*	1.4	*	*	0	*	*
	#	13	*	5	*	*	0	*	*

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.



TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	%	%	%	%	%	%
City Total	2 240	75.4	13.9	8.5	1.7	0.4	*
Hispanic	969	76.1	13.0	9.4	1.3	*	0
Puerto Rican	511	79.5	11.4	8.2	1.0	0	0
Dominican	388	72.2	14.7	10.6	2.1	*	0
Central American	12	75.0	0	*	0	0	0
South American	23	69.6	21.7	*	0	0	0
Cuban	10	90.0	0	*	0	0	0
Other Hispanic	25	68.0	24.0	*	0	0	0
White Non-Hispanic	1 053	74.3	14.9	7.8	2.2	0.6	*
Black Non-Hispanic	33	81.8	*	*	0	0	0
Other	78	76.9	14.1	*	*	0	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	46.7	32.7	7.4	13.1
Hispanic	33.8	45.5	10.7	10.0
Puerto Rican	31.6	43.1	13.0	12.3
Dominican	34.7	48.7	8.7	7.9
Central American	64.3	*	0	*
South American	52.2	39.1	*	*
Cuban	45.5	*	0	*
Other Hispanic	26.9	61.5	*	0
White Non-Hispanic	63.6	23.6	5.2	26.8
Black Non-Hispanic	48.5	33.3	*	*
Other	37.5	46.3	*	11.3

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.



TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	2 201	43.6	42.0	6.2	0.9	3.3	4.0
Hispanic	961	22.5	63.3	7.2	0.9	3.2	2.9
Puerto Rican	503	15.9	74.0	5.0	*	2.4	2.2
Dominican	384	27.6	54.4	9.1	*	4.2	3.6
Central American	14	50.0	*	*	0	*	0
South American	23	43.5	34.8	*	0	*	*
Cuban	11	63.6	*	*	0	0	*
Other Hispanic	26	23.1	50.0	*	*	*	*
White Non-Hispanic	1 035	64.1	21.4	5.4	0.8	3.4	5.0
Black Non-Hispanic	33	33.3	48.5	*	*	*	*
Other	79	49.4	32.9	*	*	*	6.3

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Lawrence Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	2 220	33.4	41.6	0.9	19.1	5.0
Hispanic	969	33.4	41.6	0.9	19.1	5.0
Puerto Rican	508	28.2	43.3	*	22.2	5.9
Dominican	387	37.5	39.5	1.6	17.1	4.4
Central American	14	57.1	*	0	*	0
South American	23	60.9	30.4	0	*	0
Cuban	11	63.6	*	*	0	0
Other Hispanic	26	26.9	65.4	0	*	*
White Non-Hispanic	1 052	70.3	18.8	4.5	4.1	2.3
Black Non-Hispanic	33	36.4	39.4	*	*	*
Other	79	63.3	24.1	*	8.9	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Lawrence Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	=	% <sup>4</sup>	=	% <sup>4</sup>	=	% <sup>4</sup>	=	% <sup>5</sup>	=	% <sup>5</sup>	=	% <sup>5</sup>
Total Births	332	35.4	640	72.8	35	54.7	703	67.5	238	40.1	64	29.2
Hispanic	189	30.1	118	59.0	17	60.7	135	47.5	136	36.5	46	26.6
Puerto Rican	111	30.9	42	57.5	7	63.6	56	47.9	71	34.8	30	28.8
Dominican	67	29.0	57	57.0	8	57.1	60	45.1	52	36.9	16	25.4
Central American	*	*	6	100.0	*	*	7	87.5	*	*	0	0
South American	5	45.4	5	55.6	*	*	7	53.8	5	71.4	0	0
Cuban	0	0	5	83.3	0	0	*	*	0	0	0	0
Other Hispanic	*	*	*	*	0	0	*	*	6	35.3	0	0
White Non-Hispanic	123	47.7	489	78.0	17	53.1	530	76.2	89	48.1	15	41.7
Black Non-Hispanic	8	42.1	8	80.0	0	0	9	81.8	5	41.7	0	0
Other	7	25.0	19	52.8	*	*	23	52.3	*	*	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.



TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public
	Number	%	%	%	%	%	%	%	%
City Total	2 905	6.8	15.5	33.4	9.4	29.2	60.6	33.5	38.9
Hispanic	374	6.1	26.7	61.1	6.0	71.9	42.5	64.5	71.7
Puerto Rican	321	6.2	29.0	65.6	6.4	71.6	39.6	68.7	77.2
Central American	9	0	*	*	0	*	66.7	*	55.5
South American	27	*	*	25.9	*	96.3	53.8	44.4	29.6
Other Hispanic	17	*	*	41.2	*	58.8	64.7	35.3	43.7
White Non-Hispanic	2 034	6.2	13.2	27.4	1.9	7.5	69.8	20.9	27.1
Black Non-Hispanic	55	*	30.9	58.2	*	23.6	53.8	44.4	53.7
Other	419	9.3	14.6	34.7	57.4	97.4	32.7	65.3	65.0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

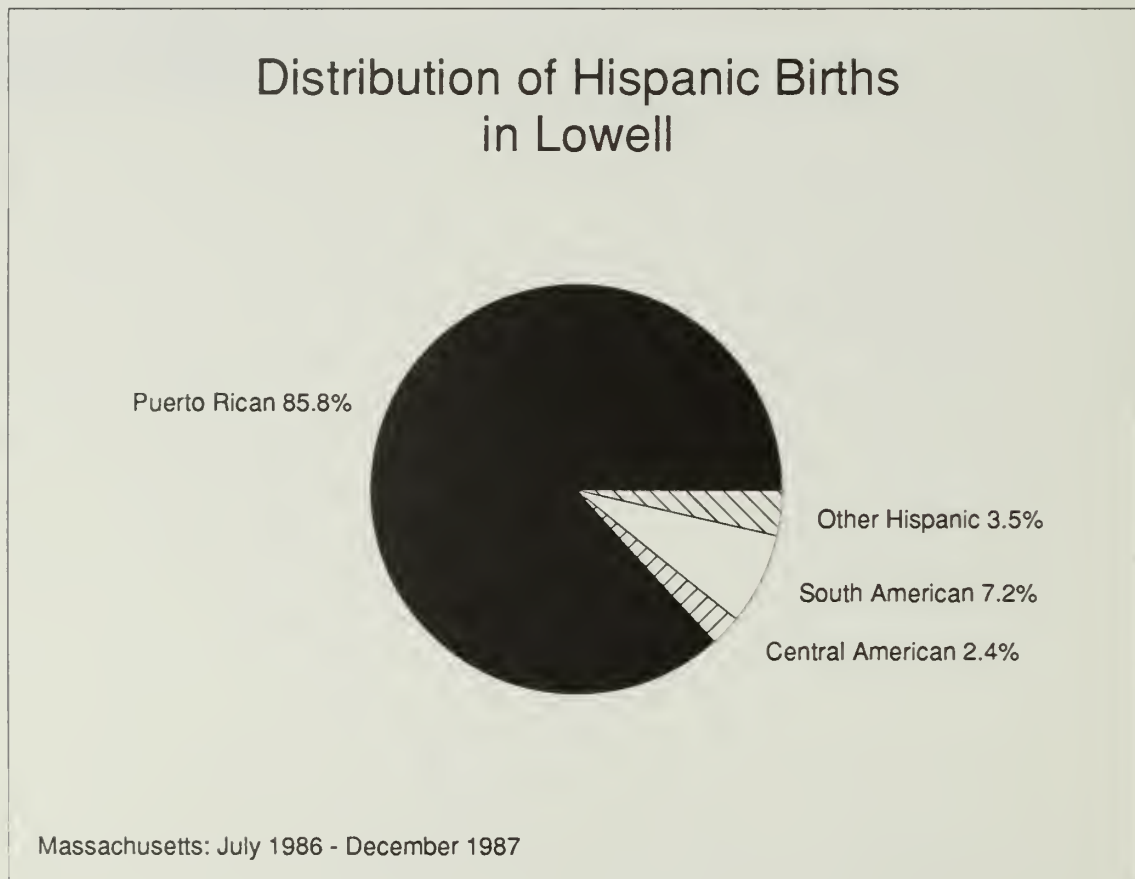


TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Lowell Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Central American		South American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Lowell General	2 140	1 382	64.6	38	1.8	365	17.1	343	16.0	297	86.6	7	2.0	25	7.3	14	4.1
St. Joseph's	211	181	85.8	6	2.8	16	7.6	7	3.3	5	71.4	0	0	*	*	*	*
Brigham & Women's	71	46	64.8	7	9.9	12	16.9	6	8.5	5	83.3	0	0	0	0	*	*
Other Hospitals	483	425	88.0	*	*	26	5.4	18	3.7	14	77.7	*	*	*	*	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	6	0.2	26	0.9	47	1.6	92	3.2	129	4.4	149	5.1	937	32.3	902	31.1	456	15.7	155	5.4
Hispanic	*	*	9	2.4	15	4.0	23	6.2	24	6.4	26	7.0	143	38.2	77	20.6	44	11.8	10	2.7
Puerto Rican	*	*	6	1.9	14	4.4	22	6.8	24	7.5	24	7.5	127	39.6	63	19.6	30	9.3	8	2.5
Central American	0	0	*	*	0	0	0	0	0	0	*	*	*	*	*	*	*	*	0	0
South American	0	0	0	0	0	0	*	*	0	0	0	0	6	22.2	9	33.3	9	33.3	*	*
Other Hispanic	0	0	*	*	*	*	0	0	0	0	*	*	7	41.2	*	*	*	*	0	0
White Non-Hispanic	*	*	11	0.5	23	1.1	53	2.6	84	4.1	97	4.8	656	32.3	692	34.1	321	15.8	92	4.5
Black Non-Hispanic	0	0	*	*	*	*	*	*	7	12.7	6	10.9	15	27.3	11	20.0	12	21.8	0	0
Other	*	*	5	1.2	7	1.7	14	3.4	14	3.4	19	4.6	113	27.1	117	28.1	75	18.0	51	12.2

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.



TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Central American	South American	Other Hispanic
<b>RISK CHARACTERISTICS</b>									
Unmarried	% <sup>1</sup>	27.4	58.2	34.7	61.1	65.6	*	25.9	41.2
	#	557	32	145	228	210	*	7	7
Smoking	%	35.4	25.4	3.1	19.5	20.2	*	*	*
	#	721	14	13	73	65	*	*	*
Parity > 1	%	6.2	9.1	20.5	13.4	14.0	*	*	0
	#	126	5	86	50	45	*	*	0
Late or No Prenatal Care <sup>2</sup>	%	23.1	38.2	59.0	47.9	51.1	*	25.9	29.4
	#	469	21	247	179	164	*	7	5
Conditions of Labor <sup>3</sup>	%	14.4	18.2	5.5	15.8	16.8	*	*	*
	#	292	10	23	59	54	*	*	*
Not Breastfeeding	%	63.5	49.1	83.3	68.5	73.7	*	37.0	35.3
	#	1 271	27	344	254	235	*	10	6
<b>ADVERSE OUTCOMES</b>									
Gestation < 37 Weeks	%	6.2	12.7	16.7	9.6	9.7	*	*	*
	#	127	7	70	36	31	*	*	*
Low Birthweight	%	6.2	*	9.3	6.1	6.2	0	*	*
	#	127	*	39	23	20	0	*	*
Apgar < 6 <sup>4</sup>	%	1.3	*	2.1	*	*	0	0	0
	#	26	*	9	*	*	0	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	9.4	25.6	65.0
Hispanic	6.0	55.0	38.9
Puerto Rican	6.4	57.4	36.2
Central American	0	*	66.7
South American	*	42.3	53.9
Other Hispanic	*	43.7	50.0
White Non-Hispanic	1.9	22.1	76.0
Black Non-Hispanic	*	37.0	61.1
Other	57.4	13.7	28.9

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Lowell Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Central American		South American		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%
Non-USA Mainland Born	269	100.0	230	85.5	*	*	26	9.7	10	3.7
USA Mainland Born	105	100.0	91	86.7	6	5.7	*	*	7	6.7

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Lowell Residents: July 1986 - December 1987

		Puerto Rican		Central American		South American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	21.7	47.3	0	*	0	*	*	*
	#	50	43	0	*	0	*	*	*
Unmarried	%	62.6	73.3	0	*	26.9	0	*	*
	#	144	66	0	*	7	0	*	*
< 8 years Education	%	7.1	*	0	0	*	0	*	0
	#	15	*	0	0	*	0	*	0
Smoking	%	15.6	31.9	0	*	*	0	0	*
	#	36	29	0	*	*	0	0	*
Parity > 3	%	14.8	12.1	0	*	*	0	0	0
	#	34	11	0	*	*	0	0	0
Late or No Prenatal Care <sup>3</sup>	%	49.6	55.0	0	*	26.9	0	*	*
	#	114	50	0	*	7	0	*	*
Conditions of Labor <sup>4</sup>	%	16.5	17.6	*	0	*	0	*	*
	#	38	16	*	0	*	0	*	*
Not Breastfeeding	%	72.9	75.6	0	*	34.6	*	*	*
	#	167	68	0	*	9	*	*	*
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	7.0	16.5	*	0	*	0	0	*
	#	16	15	*	0	*	0	0	*
Low Birthweight	%	4.8	10.0	0	0	*	0	0	*
	#	11	9	0	0	*	0	0	*
Apgar < 6 <sup>5</sup>	%	*	*	0	0	0	0	0	0
	#	*	*	0	0	0	0	0	0

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.

TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	2 875	73.5	14.5	8.6	2.8	0.6	0
Hispanic	373	75.1	10.7	11.5	1.9	*	0
Puerto Rican	320	75.3	10.3	12.5	*	*	0
Central American	9	55.6	*	*	*	0	0
South American	27	70.4	18.5	*	*	0	0
Other Hispanic	17	88.2	0	*	*	0	0
White Non-Hispanic	2 014	70.9	16.3	9.3	3.0	0.5	0
Black Non-Hispanic	53	69.8	17.0	9.4	*	*	0
Other	414	85.2	8.9	2.7	2.9	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	58.1	29.5	8.3	4.1
Hispanic	40.9	38.5	16.8	3.7
Puerto Rican	38.0	40.0	18.1	4.0
Central American	66.7	*	0	0
South American	51.9	33.3	*	*
Other Hispanic	64.7	*	*	0
White Non-Hispanic	67.6	24.9	4.4	3.2
Black Non-Hispanic	50.9	32.7	10.9	*
Other	30.8	44.6	18.9	5.7

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included

<sup>2</sup> Percents based on total in race/ethnic group.

TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

	Total Births	Private	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	2 822	55.7	33.9	4.0	1.1	2.8	2.5
Hispanic	368	22.6	65.5	4.4	1.9	1.9	3.8
Puerto Rican	316	18.0	72.2	3.2	1.9	*	3.8
Central American	9	*	*	*	*	0	0
South American	27	55.6	18.5	*	0	*	*
Other Hispanic	16	43.7	31.2	*	0	*	*
White Non-Hispanic	1 980	68.0	21.7	4.4	1.1	2.8	*
Black Non-Hispanic	54	35.2	48.2	*	*	*	*
Other	406	28.6	63.1	1.5	*	2.7	3.7

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Lowell Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	2 848	57.6	33.5	5.1	2.5	1.2
Hispanic	369	27.4	64.5	*	4.6	2.4
Puerto Rican	316	24.1	68.7	*	4.4	2.2
Central American	9	55.6	*	0	0	0
South American	27	48.1	44.4	0	*	*
Other Hispanic	17	41.2	35.3	*	*	*
White Non-Hispanic	1 996	69.8	20.9	6.5	1.9	0.9
Black Non-Hispanic	54	37.0	44.4	*	9.3	*
Other	415	28.4	65.3	1.9	2.6	1.7

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Lowell Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care+					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	378	35.8	1197	78.6	42	53.8	1194	72.5	293	32.0	42	58.0
Hispanic	85	33.1	58	72.5	*	*	66	68.0	72	31.2	8	50.0
Puerto Rican	76	32.1	39	70.9	*	*	8	66.7	63	30.0	6	46.7
Central American	*	*	*	*	0	0	*	*	*	*	*	*
South American	5	62.5	8	57.1	*	*	8	61.5	5	45.5	0	0
Other Hispanic	*	*	7	100.0	*	*	7	100.0	*	*	*	*
White Non-Hispanic	232	44.7	1051	80.3	31	55.4	1050	77.5	152	37.5	20	71.4
Black Non-Hispanic	13	46.4	13	77.8	*	*	12	63.2	13	47.8	*	*
Other	47	18.8	72	64.3	7	63.6	64	56.6	57	22.4	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.





TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

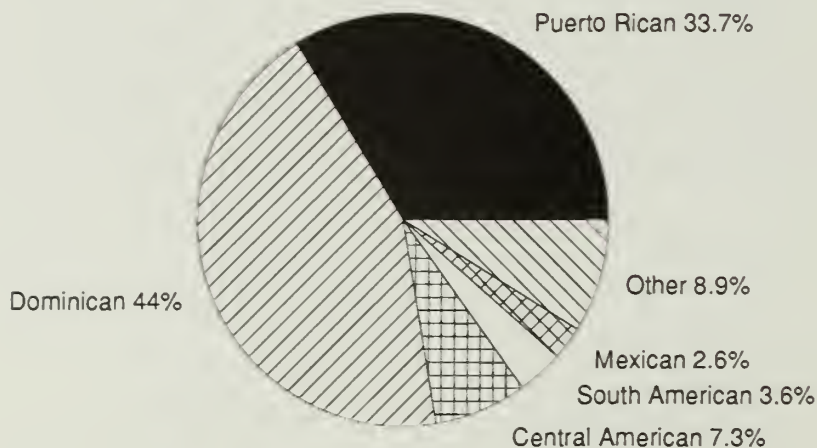
	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public
	Number	%	%	%	%	%	%	%	%
City Total	2 220	7.3	13.5	33.9	4.3	18.7	75.4	28.9	37.6
Hispanic	193	6.7	18.7	50.8	6.0	81.9	64.3	55.0	68.1
Puerto Rican	65	13.9	29.2	69.2	*	69.2	58.5	59.4	73.4
Dominican	85	*	10.6	35.3	*	96.5	69.4	53.7	71.4
Central American	14	0	*	35.7	*	85.7	64.3	42.9	*
South American	7	0	0	*	0	100.0	57.1	*	*
Mexican	5	0	20.0	*	0	0	*	*	*
Other Hispanic	17	*	42.9	76.5	*	70.6	64.7	76.5	82.4
White Non-Hispanic	1 632	6.3	11.1	27.7	1.0	4.4	79.7	20.8	28.6
Black Non-Hispanic	182	14.8	26.9	68.0	*	24.7	59.9	50.6	55.4
Other	118	7.6	12.7	33.9	52.7	91.5	48.3	70.4	79.1

\* Percents based on fewer than 5 are not calculated.

Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

## Distribution of Hispanic Births in Lynn



Massachusetts: July 1986 - December 1987

TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Lynn Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Dominican		Central American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Lynn	927	682	73.6	84	9.1	79	8.5	80	8.6	30	37.5	32	40.0	5	6.2	13	16.3
Salem	689	483	70.1	41	6.0	11	1.6	74	10.7	20	27.0	45	60.8	*	*	6	8.1
Brigham & Women's	120	68	56.7	24	20.0	7	5.8	13	10.8	6	46.2	*	*	*	*	*	*
Beverly	109	98	89.9	*	*	*	*	8	7.3	0	0	*	*	*	*	*	*
Other Hospitals	375	301	80.3	31	8.3	20	5.3	18	4.8	9	50.0	*	*	*	*	5	27.8

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	*	*	21	0.9	37	1.7	42	1.9	88	4.0	109	4.9	649	29.3	741	33.4	406	18.3	124	5.6
Hispanic	*	*	*	*	*	*	*	*	10	5.2	15	7.8	72	37.3	47	24.4	25	13.0	13	6.7
Puerto Rican	*	*	*	*	*	*	*	*	*	*	6	9.2	26	40.0	17	26.2	*	*	*	*
Dominican	0	0	0	0	*	*	0	0	*	*	5	5.9	30	35.3	19	22.4	19	22.4	8	9.4
Central American	0	0	0	0	0	0	0	0	0	0	*	*	*	*	7	50.0	*	*	*	*
South American	0	0	0	0	0	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*
Mexican	0	0	*	*	0	0	0	0	0	0	0	0	*	*	0	0	0	0	0	0
Other Hispanic	0	0	0	0	0	0	0	0	*	*	*	*	6	35.3	*	*	*	*	*	*
White Non-Hispanic	0	0	9	0.6	21	1.3	25	1.5	56	3.4	70	4.3	466	28.6	594	36.4	311	19.1	80	4.9
Black Non-Hispanic	*	*	6	3.3	7	3.8	7	3.8	14	7.7	14	7.7	57	31.3	43	23.6	25	13.7	8	4.4
Other	*	*	*	*	*	*	*	*	*	*	5	4.2	25	21.2	34	28.8	27	22.9	17	14.4

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Dominican	Central American	Other Hispanic
RISK CHARACTERISTICS									
Unmarried	% <sup>1</sup>	27.7	68.0	33.9	50.8	69.2	35.3	35.7	62.1
	#	451	123	40	98	45	30	5	18
Smoking	%	33.3	17.0	6.8	7.8	15.4	*	0	*
	#	544	31	8	15	10	*	0	*
Parity > 3	%	7.4	10.4	31.4	10.9	9.2	12.9	*	*
	#	121	19	37	21	6	11	*	*
Late or No Prenatal Care <sup>2</sup>	%	14.6	31.3	38.1	26.9	29.2	22.4	*	34.5
	#	238	57	45	52	19	19	*	10
Conditions of Labor <sup>3</sup>	%	16.1	9.9	4.2	15.5	15.4	15.3	*	17.2
	#	263	18	5	30	10	13	*	5
Not Breastfeeding	%	60.4	59.4	75.9	32.1	46.0	22.9	*	31.0
	#	976	107	88	60	29	19	*	9
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	6.4	18.1	8.5	9.8	10.8	9.4	0	*
	#	104	33	10	19	7	8	0	*
Low Birthweight	%	6.3	14.8	7.6	6.7	13.9	*	0	*
	#	102	27	9	13	9	*	0	*
Apgar < 6 <sup>4</sup>	%	1.5	2.8	7.6	*	*	*	0	0
	#	24	5	9	*	*	*	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	4.3	18.6	77.1
Hispanic	6.0	33.0	61.0
Puerto Rican	*	36.5	57.1
Dominican	*	33.8	61.0
Central American	*	*	76.9
South American	0	*	85.7
Mexican	0	*	60.0
Other Hispanic	*	35.3	52.9
White Non-Hispanic	1.0	16.2	82.8
Black Non-Hispanic	*	25.9	72.4
Other	52.7	19.1	28.2

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Lynn Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		Central American		South American		Mexican		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%
Non-USA Mainland Born	158	100	45	28.5	82	51.9	12	7.6	7	4.4	0	0	12	7.6
USA Mainland Born	35	100	20	57.1	*	*	*	*	0	0	5	14.3	5	14.3

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Lynn Residents: July 1986 - December 1987

		Puerto Rican		Dominican		Central American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	26.7	35.0	9.8	*	0	*	*	50.0
	#	12	7	8	*	0	*	*	5
Unmarried	%	66.7	75.0	35.4	*	41.7	0	47.4	90.0
	#	30	15	29	*	5	0	9	9
< 8 years Education	%	*	*	*	0	*	0	*	*
	#	*	*	*	0	*	0	*	*
Smoking	%	11.1	25.0	*	0	0	0	0	*
	#	5	5	*	0	0	0	0	*
Parity > 3	%	*	*	13.4	0	*	0	*	0
	#	*	*	11	0	*	0	*	0
Late or No Prenatal Care <sup>3</sup>	%	33.3	*	23.2	0	*	0	42.1	*
	#	15	*	19	0	*	0	8	*
Conditions of Labor <sup>4</sup>	%	15.6	*	15.8	0	*	0	*	*
	#	7	*	13	0	*	0	*	*
Not Breastfeeding	%	46.5	45.0	22.5	*	*	*	35.3	*
	#	20	9	18	*	*	*	6	*
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	*	*	9.8	0	0	0	*	*
	#	*	*	8	0	0	0	*	*
Low Birthweight	%	11.1	*	*	0	0	0	0	*
	#	5	*	*	0	0	0	0	*
Apgar < 6 <sup>5</sup>	%	*	0	*	0	0	0	0	0
	#	*	0	*	0	0	0	0	0

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.



TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	2 182	64.9	16.3	10.3	7.6	0.6	0.3
Hispanic	189	72.5	13.2	10.1	3.7	*	0
Puerto Rican	62	75.8	11.3	9.7	*	0	0
Dominican	84	69.1	15.5	10.7	*	*	0
Central American	14	78.6	*	*	*	0	0
South American	7	85.7	0	*	0	0	0
Mexican	5	*	*	*	*	0	0
Other Hispanic	17	76.5	*	*	0	0	0
White Non-Hispanic	1 612	63.3	16.1	11.1	8.6	0.6	0.3
Black Non-Hispanic	176	63.6	25.0	6.3	4.0	*	*
Other	114	78.1	11.4	*	6.1	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	75.4	17.4	4.2	3.0
Hispanic	64.3	24.9	8.8	2.1
Puerto Rican	58.5	23.1	13.9	*
Dominican	69.4	22.4	7.1	*
Central American	64.3	35.7	0	0
South American	*	*	0	0
Mexican	*	*	*	0
Other Hispanic	64.7	29.4	*	0
White Non-Hispanic	79.7	15.8	2.6	2.0
Black Non-Hispanic	59.9	22.5	12.6	5.0
Other	48.3	33.9	7.6	10.2

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.

TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%+
City Total	2 121	55.6	32.8	3.7	1.1	2.5	4.2
Hispanic	191	25.7	62.3	4.2	*	3.1	3.1
Puerto Rican	64	23.4	70.3	*	*	0	*
Dominican	84	21.4	64.3	*	*	*	*
Central American	14	57.1	*	0	0	*	0
South American	7	71.4	*	*	0	0	0
Mexican	5	*	*	*	*	*	0
Other Hispanic	17	*	82.4	0	0	*	0
White Non-Hispanic	1 600	64.5	24.2	3.6	0.7	2.6	4.4
Black Non-Hispanic	175	35.4	49.1	4.6	*	2.9	6.3
Other	115	18.3	72.2	*	*	*	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Lynn Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	2 120	58.0	28.9	4.8	6.7	1.6
Hispanic	189	23.3	55.0	3.7	15.9	*
Puerto Rican	64	20.3	59.4	*	12.5	*
Dominican	82	25.6	53.7	*	18.3	0
Central American	14	*	42.9	0	*	0
South American	7	*	*	*	*	*
Mexican	5	0	*	*	*	*
Other Hispanic	17	*	76.5	0	*	0
White Non-Hispanic	1 599	68.7	20.8	5.2	4.3	1.0
Black Non-Hispanic	174	32.2	50.6	5.2	6.3	5.8
Other	115	12.2	70.4	*	13.0	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Lynn Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	498	64.4	1012	87.1	33	62.3	1029	84.8	355	59.7	112	83.6
Hispanic	78	60.9	39	81.3	*	*	35	81.4	55	53.9	23	76.7
Puerto Rican	25	55.6	12	85.7	0	0	8	66.7	18	50.0	7	87.5
Dominican	39	65.0	15	83.3	*	*	19	90.5	24	54.5	12	80.0
Central American	*	*	5	62.5	*	*	*	*	*	*	*	*
South American	0	0	*	*	0	0	*	*	0	0	0	0
Mexican	*	*	*	*	0	0	0	0	*	*	0	0
Other Hispanic	9	64.3	*	*	0	0	*	*	8	61.5	*	*
White Non-Hispanic	308	69.1	896	87.8	25	61.0	927	85.4	210	64.4	57	87.7
Black Non-Hispanic	52	54.7	48	81.4	*	*	44	80.0	49	57.0	6	66.7
Other	39	47.6	17	80.9	*	*	10	71.4	35	46.7	9	69.2

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.



TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public <sup>1</sup>
	Number	%	%	%	%	%	%	%	%
City Total	2 281	6.4	16.8	32.4	9.7	27.0	76.0	1.1	43.2
Hispanic	151	9.3	32.5	60.3	10.0	50.3	53.0	*	88.1
Puerto Rican	132	10.6	35.6	64.4	9.9	47.7	49.6	*	90.0
Dominican	6	0	*	*	*	83.3	*	0	100.0
South American	6	0	0	*	0	83.3	100.0	0	*
Other Hispanic	7	0	0	*	0	*	83.3	0	71.4
White Non-Hispanic	1 897	5.7	14.5	26.1	9.8	25.5	79.5	0.9	36.5
Black Non-Hispanic	216	11.1	27.8	68.5	8.8	21.8	60.4	2.3	69.2
Other	17	*	0	29.4	*	58.8	76.5	0	47.1

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

## Distribution of Hispanic Births in New Bedford



Massachusetts: July 1986 - December 1987



TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
New Bedford Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Dominican		South American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
St. Luke's	2 144	1 773	82.7	208	9.7	15	0.7	148	6.9	129	87.2	6	4.1	6	4.1	7	4.7
Other Hospitals	137	124	90.5	8	5.8	*	*	*	*	*	*	0	0	0	0	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	6	0.3	16	0.7	48	2.1	73	3.2	103	4.5	138	6.1	806	35.4	652	28.6	334	14.7	103	4.5
Hispanic	*	*	*	*	*	*	12	8.0	12	8.0	17	11.3	61	40.4	23	15.2	11	7.3	7	4.6
Puerto Rican	*	*	*	*	*	*	12	9.1	12	9.1	15	11.4	53	40.2	18	13.6	9	6.8	5	3.8
Dominican	0	0	0	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*	*	*
South American	0	0	0	0	0	0	0	0	0	0	0	0	*	*	*	*	*	*	0	0
Other Hispanic	0	0	0	0	0	0	0	0	0	0	0	0	*	*	*	*	0	0	*	*
White Non-Hispanic	*	*	9	0.5	33	1.7	48	2.5	81	4.3	102	5.4	671	35.4	574	30.3	293	15.5	82	4.3
Black Non-Hispanic	*	*	6	2.8	11	5.1	13	6.0	10	4.6	19	8.8	70	32.4	47	21.8	25	11.6	14	6.5
Other	0	0	0	0	0	0	0	0	0	0	0	0	*	*	8	47.1	5	29.4	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Dominican	South American	Other Hispanic
<b>RISK CHARACTERISTICS</b>									
Unmarried	% <sup>1</sup>	26.2	68.5	29.4	60.3	64.4	*	*	*
	#	496	148	5	91	85	*	*	*
Smoking	%	11.9	17.6	*	9.3	10.6	0	0	0
	#	226	38	*	14	14	0	0	0
Parity > 3	%	5.9	10.2	*	10.6	11.4	0	0	*
	#	112	22	*	16	15	0	0	*
Late or No Prenatal Care <sup>2</sup>	%	18.2	38.0	*	39.7	42.4	*	0	*
	#	345	82	*	60	56	*	0	*
Conditions of Labor <sup>3</sup>	%	13.6	9.7	29.4	14.6	15.2	0	*	*
	#	257	21	5	22	20	0	*	*
Not Breastfeeding	%	66.2	71.0	52.9	74.8	78.0	*	*	71.4
	#	1 229	152	9	113	103	*	*	5
<b>ADVERSE OUTCOMES</b>									
Gestation < 37 Weeks	%	6.7	9.3	0	8.6	9.8	0	0	0
	#	128	20	0	13	13	0	0	0
Low Birthweight	%	5.7	11.1	*	9.3	10.6	0	0	0
	#	108	24	*	14	14	0	0	0
Apgar < 6 <sup>4</sup>	%	1.3	*	*	*	*	0	0	0
	#	24	*	*	*	*	0	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	9.7	31.7	58.6
Hispanic	10.0	50.7	39.3
Puerto Rican	9.9	55.0	35.1
Dominican	*	*	*
South American	0	*	83.3
Other Hispanic	0	*	85.7
White Non-Hispanic	9.8	29.5	60.7
Black Non-Hispanic	8.8	39.8	51.4
Other	*	*	82.4

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
New Bedford Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		South American		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%
Non USA Mainland Born	76	100.0	63	82.9	5	6.6	5	6.6	*	*
USA Mainland Born	75	100.0	69	92.0	*	*	*	*	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
New Bedford Residents: July 1986 - December 1987

		Puerto Rican		Dominican		South American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	30.2	40.6	*	*	0	0	0	0
	#	19	28	*	*	0	0	0	0
Unmarried	%	60.3	68.1	*	0	*	0	0	*
	#	38	47	*	0	*	0	0	*
< 8 years Education	%	12.9	7.3	*	0	0	0	0	*
	#	8	5	*	0	0	0	0	*
Smoking	%	7.9	13.0	0	0	0	0	0	0
	#	5	9	0	0	0	0	0	0
Parity > 3	%	12.7	10.1	0	0	0	0	*	0
	#	8	7	0	0	0	0	*	0
Late or No Prenatal Care <sup>3</sup>	%	42.9	42.0	*	0	0	0	0	*
	#	27	29	*	0	0	0	0	*
Conditions of Labor <sup>4</sup>	%	15.9	14.5	0	0	*	0	*	0
	#	10	10	0	0	*	0	*	0
Not Breastfeeding	%	73.0	82.6	*	*	0	*	*	*
	#	46	57	*	*	0	*	*	*
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	6.4	13.0	0	0	0	0	0	0
	#	4	9	0	0	0	0	0	0
Low Birthweight	%	9.5	11.6	0	0	0	0	0	0
	#	6	8	0	0	0	0	0	0
Apgar < 6 <sup>5</sup>	%	*	*	0	0	0	0	0	0
	#	*	*	0	0	0	0	0	0

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.

TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	2 241	70.2	17.1	8.7	8.7	0.2	0
Hispanic	150	66.7	22.7	8.7	*	0	0
Puerto Rican	131	67.2	22.9	8.4	*	0	0
Dominican	6	*	*	0	*	0	0
South American	6	83.3	0	*	0	0	0
Other Hispanic	7	*	*	*	0	0	0
White Non-Hispanic	1 849	70.0	16.9	9.0	3.8	*	0
Black Non-Hispanic	215	74.0	15.8	5.6	4.2	*	0
Other	17	76.5	*	*	*	0	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	75.1	19.3	4.4	1.1
Hispanic	52.3	35.8	10.6	*
Puerto Rican	49.2	39.4	10.6	*
Dominican	*	*	*	0
South American	100.0	0	0	0
Other Hispanic	71.4	*	*	*
White Non-Hispanic	78.7	17.0	3.2	1.1
Black Non-Hispanic	59.3	28.7	10.2	*
Other	76.5	*	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.



TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	2 231	50.7	33.0	8.6	8.6	1.9	4.2
Hispanic	151	9.3	80.8	5.3	*	*	*
Puerto Rican	132	6.1	84.9	3.8	*	*	*
Dominican	6	0	100.0	0	0	0	0
South American	6	*	0	*	0	0	0
Other Hispanic	7	*	*	*	*	*	0
White Non-Hispanic	1 849	56.8	25.9	9.0	1.6	2.0	4.8
Black Non-Hispanic	214	27.6	60.3	7.9	*	*	*
Other	17	47.1	41.2	*	0	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
New Bedford Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	2 230	92.8	1.1	0.3	5.0	0.7
Hispanic	150	82.7	*	*	13.3	*
Puerto Rican	131	81.7	*	*	13.7	*
Dominican	6	100.0	0	0	0	0
South American	6	*	0	0	*	0
Other Hispanic	7	100.0	0	0	0	0
White Non-Hispanic	1 849	94.3	0.9	0.3	3.8	0.7
Black Non-Hispanic	214	86.9	2.3	*	9.4	*
Other	17	94.1	0	0	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.



TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
New Bedford Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	612	64.0	965	85.8	28	68.3	1 596	77.5	10	41.7	64	57.1
Hispanic	65	49.2	10	76.9	*	*	65	52.9	*	*	11	55.0
Puerto Rican	56	47.1	5	62.5	*	*	53	49.5	*	*	9	50.0
Dominican	*	*	0	0	0	0	*	*	0	0	0	0
South American	*	*	*	*	0	0	*	*	0	0	*	*
Other Hispanic	*	*	*	*	0	0	5	83.3	0	0	0	0
White Non-Hispanic	458	68.2	905	86.6	24	68.6	1 400	80.6	8	53.3	44	62.0
Black Non-Hispanic	84	57.9	43	72.9	*	*	118	64.5	*	*	9	45.0
Other	5	62.5	7	87.5	*	*	13	81.3	0	0	0	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.



TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public <sup>1</sup>
	Number	%	%	%	%	%	%	%	%
City Total	4 121	7.2	17.3	42.7	3.4	20.4	67.8	27.1	48.5
Hispanic	906	8.3	29.2	67.3	9.7	65.8	60.1	63.5	83.3
Puerto Rican	846	8.2	29.8	68.4	10.2	65.8	60.0	64.5	84.3
Dominican	7	*	*	*	0	85.7	85.7	71.4	85.7
Central American	13	*	*	38.5	*	76.9	83.3	*	46.2
South American	18	*	*	33.3	*	83.3	50.0	55.6	55.6
Other Hispanic	22	*	36.4	77.3	0	36.4	52.4	59.1	90.9
White Non-Hispanic	2 206	5.1	9.0	22.4	1.0	5.1	76.4	12.2	25.2
Black Non-Hispanic	924	10.7	25.9	68.9	1.6	8.7	56.4	26.3	69.2
Other	59	8.5	11.9	22.0	22.4	74.6	42.1	29.3	48.3

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

## Distribution of Hispanic Births in Springfield



Massachusetts: July 1986 - December 1987

TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Springfield Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Dominican		Central American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Bay State Medical	3 860	1 991	51.6	907	23.5	53	1.4	885	22.9	828	93.6	7	0.8	13	1.5	37	4.2
Providence	183	162	88.5	5	2.7	*	*	13	7.1	12	92.3	0	0	0	0	*	*
Other Hospitals	78	53	67.9	12	15.4	5	6.4	8	10.3	6	75.0	0	0	0	0	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	17	0.4	51	1.2	81	2.0	132	3.2	187	4.5	243	5.9	1264	30.7	1273	30.9	637	15.5	231	5.6
Hispanic	7	0.8	19	2.1	32	3.5	57	6.3	61	6.7	89	9.8	352	38.9	191	21.1	71	7.8	27	3.0
Puerto Rican	7	0.8	17	2.0	31	3.7	56	6.6	55	6.5	86	10.2	329	38.9	178	21.0	62	7.3	25	3.0
Dominican	0	0	0	0	0	0	*	*	0	0	*	*	*	*	0	0	*	*	0	0
Central American	0	0	0	0	0	0	0	0	*	*	0	0	6	46.2	*	*	*	*	*	*
South American	0	0	*	*	0	0	0	0	0	0	*	*	*	*	7	38.9	*	*	*	*
Other Hispanic	0	0	*	*	*	*	0	0	5	22.7	*	*	10	45.5	*	*	*	*	0	0
White Non-Hispanic	5	0.2	8	0.4	22	1.0	27	1.2	55	2.5	80	3.6	563	25.6	833	37.8	459	20.8	150	6.8
Black Non-Hispanic	*	*	24	2.6	26	2.8	45	4.9	70	7.6	70	7.6	335	36.3	214	23.2	88	9.5	47	5.1
Other	*	*	0	0	*	*	*	*	*	*	*	*	11	18.6	24	40.7	12	20.3	5	8.5

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Dominican	Central American	Other Hispanic
RISK CHARACTERISTICS									
Unmarried	% <sup>1</sup>	22.4	68.9	22.0	67.3	68.4	*	38.5	57.5
	#	494	636	13	609	578	*	5	23
Smoking	%	30.8	27.2	15.3	17.7	17.5	0	*	22.5
	#	680	251	9	160	148	0	*	9
Parity > 3	%	7.0	12.5	18.6	14.1	14.7	0	0	*
	#	154	115	11	128	124	0	0	*
Late or No Prenatal Care <sup>2</sup>	%	20.4	37.7	50.9	34.1	33.9	*	*	45.0
	#	451	348	30	309	287	*	*	18
Conditions of Labor <sup>3</sup>	%	23.8	27.3	22.0	24.1	23.9	*	*	27.5
	#	524	252	13	218	202	*	*	11
Not Breastfeeding	%	47.0	70.9	53.5	68.0	68.9	*	38.5	62.5
	#	1 024	650	31	611	578	*	5	25
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	6.3	11.7	*	9.8	9.9	*	*	*
	#	138	108	*	89	84	*	*	*
Low Birthweight	%	5.1	10.7	8.5	8.3	8.2	*	*	*
	#	112	99	5	75	69	*	*	*
Apgar < 6 <sup>4</sup>	%	2.3	2.9	*	1.4	1.2	0	0	*
	#	50	27	*	13	10	0	0	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	3.4	27.4	69.2
Hispanic	9.7	47.4	42.9
Puerto Rican	10.2	49.1	40.7
Dominican	0	*	85.7
Central American	*	*	84.6
South American	*	*	83.3
Other Hispanic	0	45.5	54.5
White Non-Hispanic	1.0	17.0	82.0
Black Non-Hispanic	1.6	32.4	66.0
Other	22.4	29.3	48.3

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.



TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Springfield Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		Central American		South American		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%	#	%
Non-USA Mainland Born	596	100.0	557	93.5	6	1.0	10	1.7	15	2.5	8	1.3
USA Mainland Born	310	100.0	289	93.2	*	*	*	*	*	*	14	2.3

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Springfield Residents: July 1986 - December 1987

		Puerto Rican		Dominican		Central American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	21.2	46.4	*	*	0	*	*	35.3
	#	118	134	*	*	0	*	*	6
Unmarried	%	66.1	72.9	*	*	*	*	39.1	82.3
	#	368	210	*	*	*	*	9	14
< 8 years Education	%	11.7	7.3	0	0	0	*	*	0
	#	65	21	0	0	0	*	*	0
Smoking	%	15.1	22.1	0	0	*	*	*	35.3
	#	84	64	0	0	*	*	*	6
Parity > 3	%	18.3	7.6	0	0	0	0	*	*
	#	102	22	0	0	0	0	*	*
Late or No Prenatal Care <sup>3</sup>	%	34.1	33.6	*	0	*	0	47.8	41.2
	#	190	97	*	0	*	0	11	7
Conditions of Labor <sup>4</sup>	%	24.8	22.2	0	*	*	*	34.8	*
	#	138	64	0	*	*	*	8	*
Not Breastfeeding	%	70.0	66.7	*	0	*	*	47.8	82.3
	#	388	190	*	0	*	*	11	14
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	10.8	8.3	0	*	*	*	0	*
	#	60	24	0	*	*	*	0	*
Low Birthweight	%	9.3	5.9	*	*	*	0	*	*
	#	52	17	*	*	*	0	*	*
Apgar < 6 <sup>5</sup>	%	1.1	*	0	0	0	0	*	*
	#	6	*	0	0	0	0	*	*

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born.<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.<sup>5</sup> 5-minute Apgar score.

TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	4 086	64.2	13.9	10.4	10.7	0.8	*
Hispanic	904	68.9	10.4	11.5	8.5	0.7	0
Puerto Rican	844	69.6	9.6	11.7	8.5	0.6	0
Dominican	7	85.7	*	0	*	0	0
Central American	13	53.9	*	*	*	0	0
South American	13	61.1	*	*	*	*	0
Other Hispanic	22	54.5	31.8	*	*	0	0
White Non-Hispanic	2 182	61.3	15.6	12.3	12.3	0.7	0
Black Non-Hispanic	917	66.2	13.9	12.3	8.8	0.8	0
Other	57	61.4	10.5	10.5	14.0	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	66.1	25.1	6.3	2.5
Hispanic	58.3	31.2	7.4	3.1
Puerto Rican	58.2	31.1	7.7	3.1
Dominican	85.7	*	0	0
Central American	76.9	*	0	*
South American	50.0	44.4	*	0
Other Hispanic	50.0	40.9	*	*
White Non-Hispanic	74.7	18.5	4.5	2.2
Black Non-Hispanic	55.0	33.4	9.1	2.5
Other	40.7	40.7	15.3	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.

TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	4 059	48.5	43.5	3.9	1.1	2.3	0.8
Hispanic	905	15.5	80.2	2.5	0.6	0.9	*
Puerto Rican	845	14.8	81.7	2.1	*	0.7	*
Dominican	7	*	71.4	*	0	0	0
Central American	13	46.2	*	*	*	0	*
South American	18	38.9	50.0	*	0	0	0
Other Hispanic	22	*	86.4	0	0	0	0
White Non-Hispanic	2 173	70.5	19.6	4.5	1.2	3.5	0.8
Black Non-Hispanic	914	28.8	64.1	3.8	1.3	0.9	1.1
Other	58	48.3	41.4	*	0	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Springfield Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	4 062	54.4	27.1	14.0	4.0	0.5
Hispanic	904	25.6	63.5	6.1	4.7	*
Puerto Rican	844	24.9	64.5	5.9	4.5	*
Dominican	7	*	71.4	0	0	0
Central American	13	46.2	*	*	*	0
South American	18	33.3	55.6	*	0	0
Other Hispanic	22	31.8	59.1	0	*	0
White Non-Hispanic	2 176	67.7	12.2	17.5	2.1	0.4
Black Non-Hispanic	911	51.6	26.3	13.3	7.8	1.0
Other	58	51.7	29.3	15.5	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Springfield Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>
Total Births	1074	56.0	1571	80.6	56	61.5	1606	73.4	587	55.2	89	56.7
Hispanic	422	57.8	102	74.4	*	62.5	135	59.2	328	59.5	24	58.5
Puerto Rican	397	57.6	92	74.8	*	*	120	57.7	312	59.8	23	62.2
Dominican	6	100.0	0	0	0	0	*	*	5	100.0	0	0
Central American	*	*	5	100.0	0	0	5	100.0	*	*	0	0
South American	5	50.0	*	*	0	0	*	*	*	*	0	0
Other Hispanic	10	52.6	*	*	0	0	5	71.4	5	41.7	0	*
White Non-Hispanic	322	59.7	1267	83.5	49	67.1	1164	79.6	148	67.1	32	71.1
Black Non-Hispanic	321	51.9	182	69.7	*	*	286	62.0	108	46.0	32	46.4
Other	8	29.6	16	57.1	0	0	17	56.7	*	*	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.







TABLE 1. SUMMARY OF MATERNAL AND PERINATAL CHARACTERISTICS  
BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

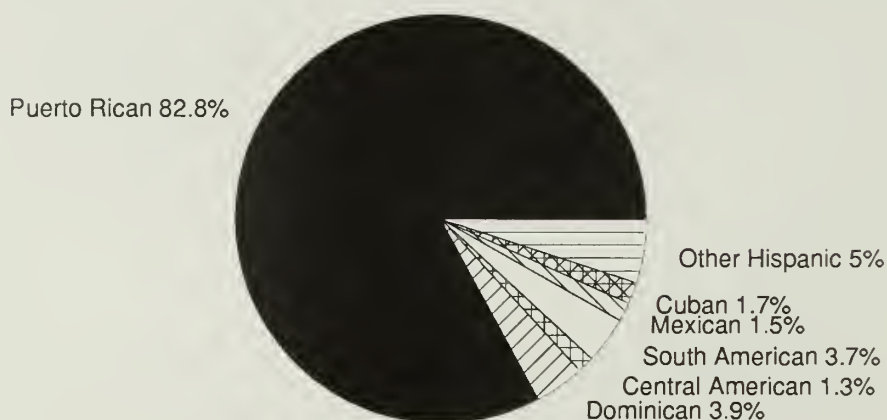
	Total Births	Low Birthweight	Maternal Characteristics				Prenatal Care		
			Age < 20 years	Unmarried	Less than 8 years Education	Non-USA Mainland Born	Adequate	Site: Hospital Clinic	Insurance: Public <sup>1</sup>
	Number	%	%	%	%	%	%	%	%
City Total	3 890	7.2	13.8	29.6	2.7	15.8	80.3	19.5	33.3
Hispanic	458	6.3	30.0	63.0	9.0	65.5	67.5	40.5	76.9
Puerto Rican	379	6.3	32.0	67.2	9.3	64.9	67.4	41.5	81.3
Dominican	18	*	*	38.9	*	83.3	88.9	33.3	55.6
Central American	6	0	0	*	0	66.7	*	*	*
South American	17	0	*	29.4	*	100.0	64.7	29.4	52.9
Mexican	7	*	*	*	0	*	*	0	*
Cuban	8	0	*	*	0	87.5	62.5	*	*
Other Hispanic	23	*	36.4	73.9	*	30.4	69.6	65.2	78.3
White Non-Hispanic	3 089	6.8	11.0	22.6	0.8	5.1	83.5	15.6	25.1
Black Non-Hispanic	182	14.8	21.0	61.3	*	19.2	69.5	32.2	53.9
Other	118	8.5	16.1	33.1	28.8	92.4	62.6	25.0	47.7

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

Figure 1.

## Distribution of Hispanic Births in Worcester



Massachusetts: July 1986 - December 1987

TABLE 2. DISTRIBUTION OF BIRTHS BY RACE/ETHNICITY FOR  
MATERNITY HOSPITALS WITH THE LARGEST NUMBER OF HISPANIC BIRTHS  
Worcester Residents: July 1986 - December 1987

Hospitals	Total Births	Race/Ethnic Groups								Hispanics							
		White Non-Hispanic		Black Non-Hispanic		Other		Total Hispanic		Puerto Rican		Dominican		South American		Other Hispanic	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>
Worcester Memorial	1 977	1 556	78.7	106	5.4	40	2.0	267	13.5	222	83.2	10	3.8	8	3.0	27	10.1
St. Vincent's	1 054	793	75.2	47	4.5	51	4.8	131	12.4	106	80.9	7	5.3	8	6.1	10	7.6
Worcester Hanneman	746	640	85.8	27	3.6	23	3.1	55	7.4	47	85.5	1	1.8	*	1.8	6	10.9
Other Hospitals	117	100	85.5	*	*	*	*	5	4.3	*	*	0	0	0	0	*	*

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on all births within each hospital.

<sup>2</sup> Percents based on Hispanic births within each hospital.

TABLE 3. AGE DISTRIBUTION OF MOTHERS BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

	AGE (IN YEARS)																			
	< 15		15		16		17		18		19		20-24		25-29		30-34		35+	
	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
City Total	5	0.1	21	0.5	69	1.8	117	3.0	153	3.9	173	4.5	1125	28.9	1255	32.3	715	18.4	257	6.6
Hispanic	*	*	7	1.5	23	5.0	30	6.6	37	8.1	37	8.1	175	38.4	77	16.9	47	10.3	20	4.4
Puerto Rican	*	*	7	1.9	19	5.0	28	7.4	35	9.3	31	8.2	150	39.7	63	16.7	34	9.0	10	2.7
Dominican	0	0	0	0	*	*	0	0	0	0	*	*	*	*	*	*	5	27.8	*	*
Central American	0	0	0	0	0	0	0	0	0	0	0	0	*	*	*	*	0	0	*	*
South American	0	0	0	0	*	*	0	0	0	0	*	*	8	47.1	*	*	*	*	*	*
Mexican	0	0	0	0	0	0	*	*	*	*	0	0	*	*	0	0	*	*	0	0
Cuban	*	*	0	0	0	0	0	0	0	0	0	0	*	*	*	*	*	*	*	*
Other Hispanic	*	*	0	0	*	*	0	0	*	*	*	*	5	22.7	6	27.3	*	*	*	*
White Non-Hispanic	0	0	10	0.3	36	1.2	72	2.3	101	3.3	120	3.9	838	27.1	1085	35.1	611	19.8	215	7.0
Black Non-Hispanic	*	*	*	*	10	5.5	9	5.0	8	4.4	7	3.9	62	34.3	43	23.8	27	14.9	11	6.1
Other	0	0	*	*	0	0	6	5.1	*	*	7	5.9	38	32.2	35	29.7	17	14.4	9	7.6

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 4. MATERNAL RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

		White Non-Hispanic	Black Non-Hispanic	Other	Total Hispanic	Puerto Rican	Dominican	South American	Other Hispanic
RISK CHARACTERISTICS									
Unmarried	% <sup>1</sup>	22.6	61.3	33.1	63.0	67.2	38.9	29.4	50.0
	#	697	111	39	288	254	7	5	22
Smoking	%	33.2	26.4	7.6	19.9	21.1	0	*	16.4
	#	1026	48	9	91	80	0	*	9
Parity > 3	%	6.7	10.4	12.7	11.6	11.4	*	*	*
	#	208	19	15	53	43	*	*	*
Late or No Prenatal Care <sup>2</sup>	%	12.8	22.5	32.2	25.8	26.1	*	29.4	27.2
	#	394	41	38	118	99	*	5	12
Conditions of Labor <sup>3</sup>	%	15.1	21.4	10.2	15.7	15.0	*	*	18.2
	#	466	39	12	72	57	*	*	8
Not Breastfeeding	%	52.0	66.9	56.6	52.1	55.2	27.8	*	53.5
	#	1 588	121	64	237	208	5	*	23
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	7.0	16.5	9.3	8.1	7.9	*	*	*
	#	215	30	11	37	30	*	*	*
Low Birthweight	%	6.8	14.8	8.5	6.3	6.3	*	0	*
	#	209	27	10	29	24	*	0	*
Apgar < 6 <sup>4</sup>	%	1.9	3.3	*	1.3	1.3	0	*	0
	#	60	6	*	6	5	0	*	0

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

<sup>2</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>3</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy, premature labor.

<sup>4</sup> 5-minute Apgar Score.

TABLE 5. MATERNAL EDUCATION BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

	Less than 8th Grade	8 - 11th Grade	12th Grade or more
	% <sup>1</sup>	%	%
City Total	2.7	22.3	75.1
Hispanic	9.0	47.8	43.2
Puerto Rican	9.3	50.9	39.8
Dominican	*	0.5	44.4
Central American	0	0	100.0
South American	*	*	64.7
Mexican	0	*	*
Cuban	0	*	85.7
Other Hispanic	*	39.1	52.2
White Non-Hispanic	0.8	18.6	81.0
Black Non-Hispanic	*	28.7	69.6
Other	28.8	21.6	49.6

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 6. PLACE OF BIRTH FOR HISPANIC MOTHERS  
Worcester Residents: July 1986 - December 1987

Birthplace	Total Hispanics		Puerto Rican		Dominican		Central American		South American		Mexican		Cuban		Other Hispanics	
	#	%	#	% <sup>1</sup>	#	%	#	%	#	%	#	%	#	%	#	%
Non-USA Mainland Born	300	100.0	246	82.0	15	5.0	*	*	17	5.7	*	*	7	2.3	7	2.3
USA Mainland Born	158	100.0	133	84.2	*	*	*	*	0	0	*	*	*	*	16	10.1

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on Row Total, i.e., either Non-USA Mainland Born or USA Mainland Born.

TABLE 7. RISK CHARACTERISTICS AND ADVERSE BIRTH OUTCOMES FOR HISPANIC MOTHERS  
BY PLACE OF BIRTH  
Worcester Residents: July 1986 - December 1987

		Puerto Rican		Dominican		South American		Other Hispanics	
		NMB <sup>1</sup>	MB <sup>1</sup>	NMB	MB	NMB	MB	NMB	MB
RISK CHARACTERISTICS									
< 20 years	% <sup>2</sup>	28.2	39.1	*	0	*	0	*	38.1
	#	69	52	*	0	*	0	*	8
Unmarried	%	66.7	68.2	46.7	0	29.4	0	36.4	63.6
	#	164	90	7	0	5	0	8	14
< 8 years Education	%	11.4	5.3	*	0	*	0	*	*
	#	28	7	*	0	*	0	*	*
Smoking	%	17.9	27.1	0	0	*	0	*	31.8
	#	44	36	0	0	*	0	*	7
Parity > 3	%	12.6	9.0	*	0	*	0	*	*
	#	31	12	*	0	*	0	*	*
Late or No Prenatal Care <sup>3</sup>	%	28.5	21.8	*	0	29.4	0	36.4	*
	#	70	29	*	0	5	0	8	*
Conditions of Labor <sup>4</sup>	%	14.6	15.8	*	*	*	0	*	*
	#	36	21	*	*	*	0	*	*
Not Breastfeeding	%	52.0	61.1	*	*	*	0	40.9	66.7
	#	128	80	*	*	*	0	9	14
ADVERSE OUTCOMES									
Gestation < 37 Weeks	%	7.7	8.3	*	0	*	0	0	*
	#	19	11	*	0	*	0	0	*
Low Birthweight	%	2.9	12.8	*	0	0	0	0	*
	#	7	17	*	0	0	0	0	*
Apgar < 6 <sup>5</sup>	%	*	*	0	0	*	0	0	0
	#	*	*	0	0	*	0	0	0

\* Numbers and Percents based on fewer than 5 are not calculated.

<sup>1</sup> NMB: Non-USA Mainland Born; MB: USA Mainland Born.

<sup>2</sup> Percents based on Column Total, i.e., either Non-USA Mainland Born or USA Mainland Born

<sup>3</sup> Onset of prenatal care between 4th and 9th months of pregnancy, or no prenatal care.

<sup>4</sup> One or more of these conditions: preterm labor, preeclampsia, prolonged pregnancy or premature labor.

<sup>5</sup> 5-minute Apgar score.



TABLE 8. METHOD OF DELIVERY BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

	Total Births	Spontaneous	Primary C-Section	Repeat C-Section	Forceps	Vaginal After Prior C-Section	Other
	Number	% <sup>1</sup>	%	%	%	%	%
City Total	3 880	66.3	13.3	8.0	10.7	1.3	0.3
Hispanic	458	72.9	12.4	7.4	5.9	1.1	*
Puerto Rican	379	73.3	12.7	7.4	5.3	1.3	0
Dominican	18	72.2	*	*	*	0	0
Central American	6	83.3	0	*	0	0	0
South American	17	64.7	*	*	*	0	0
Mexican	7	85.7	0	*	0	0	0
Cuban	8	62.5	*	0	*	0	0
Other Hispanic	23	69.9	*	*	*	0	*
White Non-Hispanic	3 078	65.0	13.1	8.3	11.8	1.4	0.3
Black Non-Hispanic	180	61.7	20.6	10.0	7.2	*	0
Other	118	74.6	10.2	*	11.0	*	0

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 9. ADEQUACY OF PRENATAL CARE UTILIZATION BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

	Adequate <sup>1</sup>	Intermediate	Inadequate or None	Unknown
	% <sup>2</sup>	%	%	%
City Total	79.6	16.6	2.8	0.9
Hispanic	67.3	28.0	4.4	*
Puerto Rican	67.0	27.4	5.0	*
Dominican	88.9	*	0	0
Central American	*	*	0	0
South American	64.7	35.3	0	0
Mexican	*	*	*	0
Cuban	62.5	*	0	0
Other Hispanic	69.6	30.4	0	0
White Non-Hispanic	82.9	14.0	2.4	0.8
Black Non-Hispanic	67.6	26.4	3.3	2.8
Other	61.0	27.1	9.3	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percent adequate may differ from Table 1 because unknowns are included.

<sup>2</sup> Percents based on total in race/ethnic group.



TABLE 10. SOURCE OF PRENATAL CARE PAYMENT BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

	Total Births	Private <sup>1</sup>	Medicaid	Healthy Start	Other Government <sup>2</sup>	Self Pay & Free Care <sup>3</sup>	Other Insurance
	Number	% <sup>4</sup>	%	%	%	%	%
City Total	3 854	63.6	27.2	5.4	0.6	2.6	0.5
Hispanic	458	19.9	71.8	5.0	0	3.1	*
Puerto Rican	379	16.1	78.1	3.2	0	2.4	*
Dominican	18	44.4	33.3	*	0	0	0
Central American	6	*	*	*	0	0	0
South American	17	41.2	*	35.3	0	*	0
Mexican	7	*	*	0	0	*	0
Cuban	8	*	*	0	0	*	0
Other Hispanic	23	*	78.3	0	0	*	0
White Non-Hispanic	3 074	72.0	19.0	5.4	0.7	2.3	0.5
Black Non-Hispanic	180	41.7	45.6	7.8	*	3.9	*
Other	116	50.0	43.1	*	*	*	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>2</sup> Other Government: Workers' Compensation, Medicare, Other, etc.

<sup>3</sup> Self Pay & Free Care: includes uncompensated care.

<sup>4</sup> Percents based on total in race/ethnic group.

TABLE 11. SITE OF PRENATAL CARE BY RACE/ETHNICITY  
Worcester Residents: July 1986 - December 1987

	Total Births	Private	Hospital Clinic	Health Maintenance Organization	Community Health Center	Other
	Number	% <sup>1</sup>	%	%	%	%
City Total	3 849	58.7	19.5	12.4	9.6	0.8
Hispanic	457	22.8	40.5	5.7	30.6	*
Puerto Rican	378	22.2	41.5	4.2	31.5	*
Dominican	18	33.3	33.3	*	*	0
Central American	6	*	*	*	*	0
South American	17	*	29.4	*	29.4	0
Mexican	7	*	0	*	*	0
Cuban	8	*	*	0	*	0
Other Hispanic	23	*	65.2	0	21.7	0
White Non-Hispanic	3 070	66.1	15.6	13.1	4.7	0.6
Black Non-Hispanic	177	37.3	32.2	15.3	13.6	*
Other	116	43.1	25.0	14.7	16.4	*

\* Percents based on fewer than 5 are not calculated.

<sup>1</sup> Percents based on total in race/ethnic group.

TABLE 12. PROPORTION OF MOTHERS WITH ADEQUATE PRENATAL CARE UTILIZATION  
FOR SELECTED SOURCES OF PAYMENT AND SITES OF CARE  
Worcester Residents: July 1986 - December 1987

	Prenatal Care Source of Payment						Prenatal Site of Care					
	Public <sup>1</sup>		Private <sup>2</sup>		Self Pay & Free Care <sup>3</sup>		Private		Hospital Clinic		Community Health Center	
	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>4</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>	#	% <sup>5</sup>
Total Births	853	67.2	2152	88.2	62	62.0	1928	85.7	520	69.6	212	64.6
Hispanic	226	64.6	73	80.2	9	64.3	80	76.9	127	69.0	82	66.7
Puerto Rican	199	65.0	49	80.3	6	66.7	64	76.2	106	67.9	72	60.5
Dominican	9	90.0	7	87.5	0	0	6	100.0	5	83.3	*	*
Central American	0	0	*	*	0	0	*	*	0	0	0	0
South American	5	55.5	6	85.7	0	0	*	*	*	*	*	*
Mexican	0	0	*	*	0	0	*	*	0	0	*	*
Cuban	*	*	*	*	6	66.7	*	*	*	*	*	*
Other Hispanic	12	92.3	*	*	*	*	*	*	13	86.7	*	*
White Non-Hispanic	542	70.8	1958	88.9	47	63.5	1759	87.0	340	71.4	101	71.1
Black Non-Hispanic	57	60.6	62	82.7	*	*	49	74.2	36	64.2	16	69.6
Other	24	44.4	45	80.4	*	*	31	66.0	15	51.7	11	57.9

\* Numbers and percents based on fewer than 5 are not calculated.

<sup>1</sup> Public: Medicaid, Healthy Start, Medicare, Other Government, Workers' Compensation.

<sup>2</sup> Private: Blue Cross, Commercial Insurers, Health Maintenance Organization.

<sup>3</sup> Includes uncompensated care.

<sup>4</sup> Percent of women of a specific national origin in each payment group who received adequate prenatal care.

<sup>5</sup> Percent of women of a specific national origin at each site of care who received adequate prenatal care.

## *APPENDICES*

## Glossary

### Adequacy of Prenatal Care

Based on the Kessner Index, prenatal care is classified into five categories (adequate, intermediate, inadequate, no prenatal care, and unknown). It is based upon trimester in which prenatal care began and the number of prenatal visits. The classification scheme is as follows:

CATEGORY	TRIMESTER CARE BEGAN	NUMBER OF VISITS
Adequate	1	9 or more
Intermediate	1	5 - 8
	2	5 or more
Inadequate	1	1 - 4
	2	1 - 4
	3	1 or more
No Prenatal Care	-	0
Unknown	unknown	unknown

This classification is adjusted for gestational age to allow for proper classification of premature births.

### Apgar Score

This is a general measure of physical condition of the newborn infant. It is performed two times at 1 minute and 5 minutes after birth. The infant is given a score between 0 (poor) and 2 (good) on five items: heart rate, respiration, muscle tone, reflex response, and color. The total on these five items makes up the summed Apgar score.

### Birthweight

Birthweight is the weight of an infant recorded at the time of delivery. Birthweight may be recorded in either pounds/ounces or grams.

Normal birthweight: An infant's birthweight of more than 2,500 grams or 5.5 lbs.

Low birthweight (LBW): An infant's birthweight of less than 2,500 grams or 5.5 lbs.

Very low birthweight (VLBW): An infant's birthweight of less than 1,500 grams or 3.3 lbs.

### Caesarean Section or C-Section

Primary: A mother's first occurrence of a caesarean section delivery.

Repeat: A caesarean delivery which has been preceded by at least one other caesarean delivery.

### Ethnicity

One of 38 codes indicating ancestry from the Parental Information Form. For data presented in this publication, ethnicity is that reported by the infant's mother.

Hispanic: A mother is considered Hispanic if she indicates 'Hispanic' as her race or indicates one of these groups for ethnicity: Puerto Rican, Dominican, Cuban, or Mexican. Persons who characterize their ancestry as Central American, South American, or from another Spanish-speaking country are classified as Hispanic as well.

Hispanic subgroup: One of seven groups of Hispanic ethnicity: Puerto Rican, Dominican, Cuban, Mexican, Central American, South American, or Other Hispanic.

### Gestational Age

The length of time a fetus is in utero before birth. Average gestational age is between 37 weeks and 42 weeks.

### Healthy Start

A Massachusetts-funded program providing services and financing for prenatal care and delivery to low-income pregnant women.

### Non-USA Mainland Born

Born outside of the continental United States. For example, women born in Puerto Rico, the Virgin Islands, and Guam are non-USA mainland born.

### Parity

The number of live births, including the present birth.



## Race

One of six codes indicating race from the Parental Information Form: White, Black, Asian Indian, other Asian, American Indian, and Other. For data presented in this publication, race is that reported by the infant's mother.

Race/ethnicity: Data on race and ethnicity for each parent were available in June 1986, by using the new birth certificate implemented on June 1, 1986. Race/ethnicity categories are assigned on the basis of the cross classification of the 38 ethnicity and six race codes. The major effect of this modification is the more precise specification of Hispanic ethnicity, resulting in a decrease in births previously classified as births to white mothers and an increase in Hispanic births.

Race subgroup: One of four race/ethnic groups - White non-Hispanic, Black non-Hispanic, Hispanic, or Other (includes Asian Indian, other Asian, American Indian, and Other).

## Resident Birth

The usual place of residence as reported by the mother. An infant's residence is considered to be that of the mother. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Vital statistics data may be presented either in terms of residence or occurrence. Resident data include all events which occur to residents of the Commonwealth, wherever they occur. Occurrence data include all events which occur within the state, including those which occur to non-residents. All data in this publication are resident data. There is an interstate exchange agreement among the 50 states and Canada which provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

## Maternity Hospitals in Massachusetts

Addison Gilbert	Gloucester
Anna Jaques	Newburyport
Bay State Medical Center	Springfield
Berkshire Medical Center	Pittsfield
Beth Israel	Boston
Beverly	Beverly
Bon Secours <sup>1</sup>	Methuen
Boston City	Boston
Brigham & Women's	Boston
Brockton	Brockton
Burbank	Fitchburg
Cambridge City	Cambridge
Cape Cod	Barnstable
Charlton Memorial	Fall River
Cooley Dickenson	Northampton
Emerson	Concord
Fairview	Great Barrington
Falmouth	Falmouth
Framingham Union	Framingham
Franklin County Public	Greenfield
Goddard Memorial	Stoughton
Harrington Memorial	Southbridge
Haverhill Municipal	Haverhill
Henry Heywood Memorial	Gardner
Hunt Memorial	Danvers
Jordan	Plymouth
Lawrence General	Lawrence
Leominster	Leominster
Leonard Morse	Natick
Lowell General	Lowell
Lynn	Lynn
Malden	Malden
Martha's Vineyard	Oak Bluffs
Mary Lane	Ware
Melrose-Wakefield	Melrose
Milford-Whitinsville	Milford
Morton	Taunton
Mount Auburn	Cambridge
Nantucket Cottage	Nantucket
New England Memorial	Stoneham
Newton-Wellesley	Newton
North Adams Regional	North Adams
Norwood	Norwood
Providence	Holyoke
Quincy City	Quincy
Salem	Salem
South Shore	Weymouth
St. Elizabeth's	Boston
St. Joseph's	Lowell
St. Luke's	New Bedford
St. Margaret's	Boston
St. Vincent's	Worcester
Sturdy Memorial	Attleboro
Tobey	Wareham
Waltham	Waltham
Worcester Hahnemann	Worcester
Worcester Memorial	Worcester

---

<sup>1</sup>In October 1988, the name of this facility was changed to Holy Family Hospital and Medical Center.











